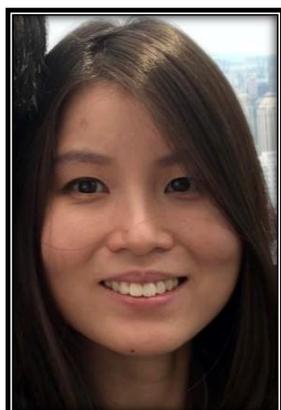


## Cellular mechanisms underlying the production of Immunoglobulin A to food antigens



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10.00am

BTI Boardroom  
Level 6, Centros

Hosted by Dr Xu Shengli

### Seminar Abstract

Immunoglobulin A (IgA) is the dominant antibody isotype in the gut. Secretory IgA in the gut has often been ascribed a tolerogenic role due to its ability to neutralize toxins and regulate commensal bacteria without inducing pathological inflammatory response. Although recent work has elucidated how bacteria-reactive IgA is induced, little is known about how IgA to food antigens is regulated. While IgA is presumed to be induced against food antigens in a healthy gut at steady state via dietary exposure and food-specific IgA has been suggested to play a role in mitigating food allergy, data on the latter have been controversial. In this seminar, I will share my PhD work which focus on trying to understand the cellular pathways underlying IgA production to food antigens in mice and man. The main aim of this study is to elucidate unique pathways that lead to the production of food-specific IgA in order to devise ways to perturb it specifically without affecting IgA against gut microbiome *in vivo* to study the role of food-specific IgA in allergy.

### About the Speaker

Biyan graduated from National University of Singapore with a BSc in Life Sciences in 2013 and joined Singapore Immunology Network (SigN) for a year before embarking on PhD studies in the United States (Yale; Immunobiology 2014-2020). In SigN, Biyan worked under the supervision of Dr. Wong Siew Cheng to understand the regulation of IL-1 $\beta$  production by different monocyte subsets. Being interested in immunological tolerance to food antigens and commensal bacteria, Biyan focused her PhD studies on trying to understand the immunological mechanisms mitigating food allergy. Working under the supervision of Dr. Stephanie Eisenbarth, Biyan and her colleagues in the Eisenbarth lab explored the cellular pathways regulating humoral responses to food and aeroallergens. After

graduation, Biyan joined the Immunology group in BTI working under Professor Lam Kong Peng. Here in BTI, Biyan will continue to pursue her interest in mucosal immunology.