

NCGG SEMINAR

“Dissecting the various facets of immunity in older adults”

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Time and Date: at 16:00 ~ 17:00 on 7 Oct, 2016 (Fri)

**Room: The 2nd floor Conference Hall Small
in the 1st Research building, NCGG**

<Reference for Seminar>

Many theories exist to explain aging and age-associated functional decline. Loss and unbalanced immune functions is one hypothesis to explain age-related decreased immunosurveillance, response to vaccination as well increased levels of pro-inflammatory molecules. The expansion of late-stage differentiated T cells, occupying the immunological space as well as inflamm-aging are associated with chronic stimulation of the immune system. We believe immunological history is an important factor influencing future health and that stemness is a cornerstone in the maintenance of immune robustness. Aging can be seen as one of the final steps of a continuous process that starts very early in life. Also, various infectious diseases that can occur at different ages impact on the immune system. Human aging has been extensively studied at the clinical level and shown to involve many systems. While we are interested on the immunological aspects of aging, we should not omit the multiple interactions the immune system has with other systems. For this reason, studying the impact of aging on immunity (and vice versa) needs to take into account the specificity of each individual (eg. co-morbidities). In this presentation, we will cover topics from cellular senescence, along with immunosenescence to their clinical implication and how important this is for the field of human aging research. We will go through several facets of the immune system and discuss possible targets for intervention.

1. Inflammatory and immune markers associated with physical frailty syndrome: findings from Singapore longitudinal aging studies. Lu Y, Tan CT, Nyunt MS, Mok EW, Camous X, Kared H, Fulop T, Feng L, Ng TP, **Larbi A.** *Oncotarget.* 2016 May 17;7(20):28783-28795.
2. Compartmentalization of immunosenescence: a deeper look at the mucosa. Martelli S, Pender SL, **Larbi A.** *Biogerontology.* 2016 Feb;17(1):159-176.

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