1st Vaccine Science Seminar

Gut Mycobiome and the Host: when Immunity encounters the Giants

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Date: **Tuesday,Dec 10,2019**
Time: **11:00am-12:00pm**
Venue: **Medical Science Museum, multipurpose room**

Host:
Prof.Ken J. Ishii
Division of Vaccine Science
(ext.75314)

Abstract:

The rapid development of deep sequencing and computational technologies has provided utmost opportunities to explore the structure and functionality of microbial communities associated with our body surfaces. The bacteria have been the primary focus of these efforts. Less data is currently available to similarly characterize the fungal microbiota — the mycobiota. Nevertheless, recent studies have revealed that host-associated fungal populations are also dynamic and responsive to environmental and pathophysiological changes. Here I will discuss how mucosal immunity responds and has been trained to interact with fungi in the gut. I will define specific patterns associated with fungal dysbiosis, point towards fungal species that expand in the human gut during intestinal disease and will discuss mechanisms of intestinal domination by gut-native fungal species. I will further discuss mechanisms of innate immune recognition of intestinal fungi under homeostatic conditions and during inflammation.

Publication list:

Iliev ID et al., Science. 2012. Iliev ID. Cell Host Microbe. 2015. Wheeler ML et al., Cell Host Microbe. 2016. Iliev ID et al., Nat Rev Immunol. 2017. Li X et al., Sci Immunol. 2017. Leonardi I et al., Science. 2018. Li X et al., Cell Host Microbe. 2018. Doron I et al., Fungal Genet Biol. 2019. Li XV et al., Immunity. 2019. Fiers WD et al., Curr Opin Microbiol. 2019.