

Seminar Announcement

Dr. Nicolas Chevrier

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Characterize and Manipulate the Immune System

Host immune responses rely on the arrangement over time of molecular networks within and between cells, as well as across the body. This complexity poses a fundamental challenge to the study and manipulation of immunological processes in the context of health and disease.

Our group explores the molecular and cellular circuits forming the functional units of immune responses to microorganisms and vaccines in the natural setting of the host. To investigate the organization and rules underlying these circuits, we develop and apply experimental and computational approaches at various levels of resolution – from a single to an entire set of cellular components, or from single cells to multicellular or multi-organ interactions.

Here I will present data on (1) the systematic dissection of the Toll-like receptor (TLR) ‘signaling-to-transcription’ network in dendritic cells using functional genomics and proteomics approaches, as an example of the larger question of intracellular circuit reconstruction; and (2) the dissection of inter-organ responses to infection in mice using genomics, as an example of the challenge of characterizing immune responses at the organism-level.

Date Monday, December 16, 2013

Time 4:30 pm- 5:30 pm

Vanue **BIKEN Hall, BIKEN Main Bldg.**

**Host: Laboratory Host Defense
Shizuo Akira (Ext. 8303)**