Institute of Molecular and Cell Biology

A*STAR

SEMINAR ANNOUNCEMENT

We would like to invite you to attend this seminar hosted by Prof. Wanjin Hong:

Date: 23 January 2018, Tuesday

Time: 11:00AM – 12:00PM

Venue: Level 3, IMCB Seminar Room 3-46, Proteos, Biopolis

Speaker: Prof. Jianzhu Chen, Department of Biology, Massachusetts Institute of Technology, USA

Title: Modulation of Macrophage Activity in Disease Intervention

Macrophages are a dynamic and heterogeneous cell type of the innate immune system. Among their diverse functions, they maintain tissue homeostasis and microenvironment and provide the first line of defense against microbial infection. In particular, macrophages readily respond to environmental stimuli and change their phenotypes and activity. In our study of macrophage-targeting drugs, we have screened human macrophage responses to over four thousand FDA-approved drugs, bioactive compounds and natural products. Our screen identified ~130 drugs/compounds that polarize macrophages to the inflammatory M1 phenotype and ~180 drugs/compounds that polarize macrophages to the anti-inflammatory M2 phenotype. These and follow-up studies have identified novel pathways for macrophage polarization. These results are being explored for cancer immunotherapy and other macrophage-involved diseases such as inflammation and fibrosis.

Biography:

Jianzhu Chen is Professor of Biology at Koch Institute for Integrative Cancer Research and Department of Biology at Massachusetts Institute of Technology (MIT). He was the lead Principle Investigator of the Infectious Disease Interdisciplinary Research Group of Singapore-MIT Alliance for Research and Technology (SMART). Dr. Chen's research seeks fundamental understanding of the immune system as well as its application in disease intervention. Recently, his research activity has focused on macrophages in immunity and diseases and cancer immunotherapy. Dr. Chen received a B.S. degree from Wuhan University in China and a Ph.D. degree from Stanford University. He was a postdoctoral fellow and then an instructor at Harvard Medical School before he joined the faculty in the Department of Biology at MIT.

ALL ARE WELCOME *(No registration required)*