CSCB Seminar Series

Title:

"Therapeutic Strategies for targeting cancer stem cells."

Abstract:

Cancer stem cells (CSCs) are a subset of tumor cells that are responsible for initiating and maintaining the disease. In the clinical point of view, the most important characteristics of CSCs include their resistance to various therapeutic interventions. However, the underlying mechanisms of the resistance remain unclear. We have recently found that expression of a CSC marker, CD44, in particular variant forms of CD44 (CD44v), contributes to the defense against reactive oxygen species (ROS) by promoting the synthesis of reduced gluathione (GSH). CD44v interacts with and stabilizes xCT, a subunit of a glutamate-cystine transporter, and thereby promotes the uptake of cystine for GSH synthesis (Cancer Cell 2011). Therefore, ablation of CD44 reduced GSH levels and increased ROS levels, leading to suppression of tumor growth and metastasis in both transgenic and xenograft tumor models (Nat Commun 2012; Cancer Res 2013). Based on these preclinical findings, we conducted clinical trials using an xCT inhibitor for cancer patients. In addition to the role of CD44v, I will talk about the new therapeutic strategy for CSCs by induction of trans-differentiation.

Date:

27th November 2017 (Monday)

Time:

12:00 PM to 1:00 PM

Venue:

Amphitheatre, Level 2
Duke-NUS Medical School
8 College Road, S169857

(Opposite Singapore General Hospital, Block 6/7)

Host:

Sang Hyun LEE, PhD
Associate Professor
Programme in Cancer & Stem Cell Biology
Duke-NUS Medical School

"No registration is required."
Any enquiry, please contact Lilian Poon (Tel: 6601 3779)

Speaker:



Hideyuki Saya, MD, PhD
Professor, Division of Gene Regulation,
Institute for Advanced Medical Research,
Graduate School of Medicine, Keio University
Japan

Biography:

Prof. HIDEYUKI SAYA graduated from Kobe University School of Medicine in 1981 and was Resident in the Department of Neurosurgery until 1983. After which he joined the Graduate School of Medical Sciences to gain his PhD in 1987. He studied as a Postdoctoral Fellow at the Brain Tumor Research Center, UCSF until 1988 then was appointed Assistant Professor at the Department of Neuro-Oncology, M.D. Anderson Cancer Center, Houston, TX. From 1994 to 2006, Prof Saya was Professor and Chairman of the Department of Tumor Genetics and Biology, Kumamoto University School of Medicine before taking his current position as Professor at the Institute for Advanced Medical Research at Keio University School of Medicine in 2007. Prof Saya is currently a vice president of Keio University Hospital and Director of Clinical and Translational Research Center.