

CSCB Hybrid Seminar Series

Age matters in leukemia

Date: 13th Jun 2022 (Monday)**Venue:** Amphitheatre, Level 2, Duke-NUS Medical School**Time:** 12noon - 1pm (SGT)**For Zoom details please contact****Gazal Jain** gazal.jain@duke-nus.edu.sg

Abstract:

Acute myeloid leukemia (AML) caused by chromosomal translocation t(8;21) is among the most common leukemia and has been extensively investigated; however, no tractable murine models have been generated. To overcome the problems in the earlier attempts, we established eR1-CreERT2 system which enables the leak-free, age- and hematopoietic stem cells (HSC)-specific induction of any gene of interest, and then induced the RUNX1-ETO generated by t(8;21) at various ages in mice. Interestingly, the induction of RUNX1-ETO in childhood HSCs largely caused aggressive AML with nearly complete penetrance and a short latency, whereas the induction in adult HSCs predominantly led to smoldering myeloproliferative disorder with a very long latency and/or incomplete penetrance. Malignant cells frequently exhibit granulocytic maturation with B cell features. Such young onset coupled with cellular characteristics recapitulate clinical features in human t(8;21) leukemia. This clinically relevant mouse leukemia model serves as a powerful platform for further molecular dissection of t(8;21) leukemogenesis and development of novel therapeutics.

Speaker



Motomi Osato

Associate Professor, Cancer Science Institute
National University of Singapore

Dr. Osato received his MD from Oita Med Univ; PhD from Kumamoto Univ, Japan; and postdoctoral research training at Kyoto Univ and Institute of Molecular and Cell Biology, A*STAR. He is currently Associate Professor at CSI/NUS, and conducting leukemia research towards novel therapeutics. His best-known research accomplishment is the detection of point mutations in the RUNX1 gene in acute myeloid leukemia. This genetic change is included in the WHO leukemia classification.

Host:

Li Shang

Associate Professor

Programme in Cancer & Stem Cell Biology
Duke-NUS Medical School | Singapore

No registration is required

All are welcome

Any enquiries, please contact:

Jamie Liew – jamie.liew@duke-nus.edu.sg

Gazal Jain – gazal.jain@duke-nus.edu.sg