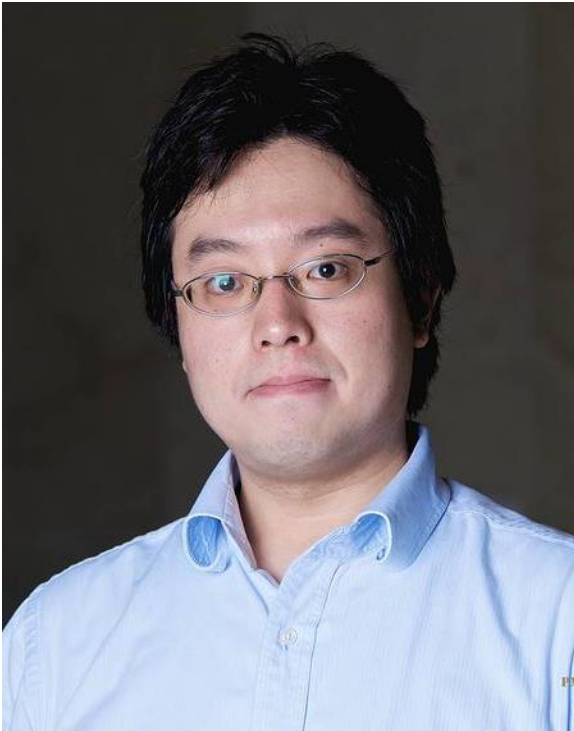


SEMINAR

Thurs 7 Nov 2019 | 11am | DBS Conference Room 1

Hosted by A/Prof Yusuke Toyama



Spatial- Temporal Regulations in Human Developmental Hematopoiesis

By Rio Sugimura

Research Fellow at Boston Children's Hospital, USA

The hematopoietic system sustains life through an almost limitless production of blood cells and resistance to infection. Genetic and environmental defects during developmental hematopoiesis causes hematologic cancers, anemias, and bone marrow failure syndromes. Recent progress of whole genome sequencing has been annotating candidate SNPs and intrinsic modulators in human hematopoietic defects. However, precise understanding of the extrinsic modulators, such as microenvironmental signaling, whose significance in developmental hematopoiesis is described in model organisms but not in human, is yet to be done. My research program will focus on the molecular mechanism of developmental hematopoiesis through induced-pluripotent stem cell technology and microfluidics. I propose that the Fetal-Organ-Chip platform will serve as a genetically amenable platform to understand and intervene molecules involved in developmental hematopoiesis. This proposed study will ultimately provide a fundamental molecular mechanism of developmental hematopoiesis in human beings.