

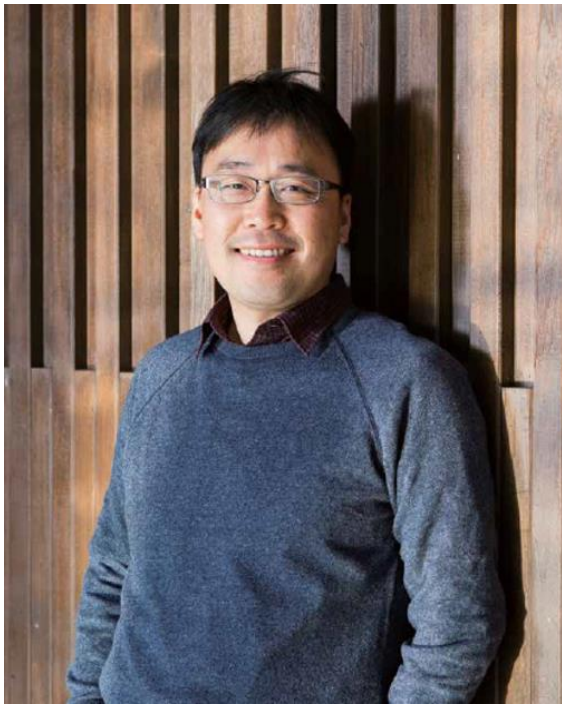


BIOLOGY COLLOQUIUM

Friday, 12 Oct 2018 | 4pm | DBS Conference Room 1

Hosted by Dr Chae Eunyong

Delicacy of histone methyltransferase complexes



By Ji-Joon Song

Associate Professor, Department of Biological Sciences, KAIST Institute, Korea

The methylations of histone tails leads to diverse consequence depending on the position of lysines and the methylation levels. Methylation of H3 at lysine36 in transcriptionally active chromatin is an important for transitional fidelity in eukaryotes¹. Human Absent, Small or Homeotic discs 1 like (ASH1L) is a histone H3 Lys36 methyltransferase. We previously showed that ASH1L is auto-inhibited by the auto-inhibitory loop in the postSET domain, and that ASH1L forms a complex with MRG15 becoming an active enzyme. However, molecular basis on how this complex is formed and the mechanism by which ASH1L is activated is unknown. Here, we present a structural and molecular basis on the activation mechanism of ASH1L by MRG15 binding suggesting a novel regulation mechanism of histone methyltransferases.

About the speaker

Professor Song received his B.S. at Seoul National University, and M.S. at Gwanju Institute Science and Technology, Korea. He earned his Ph.D. at the Watson School of Biological Sciences, Cold Spring Harbor Laboratory, USA in 2005. He worked as a research fellow at Massachusetts General Hospital, Harvard Medical School until 2008. He is a recipient of Bristol-Myers Squibbs predoctoral fellowship and the Jane Coffin Childs Fund Fellowship. Professor Song joined as a faculty at Department of Biological Sciences, Korea Advanced Institute of Science and Tehnology (KAIST), Korea, and is currently associate professor with tenure.