

# SEMINAR

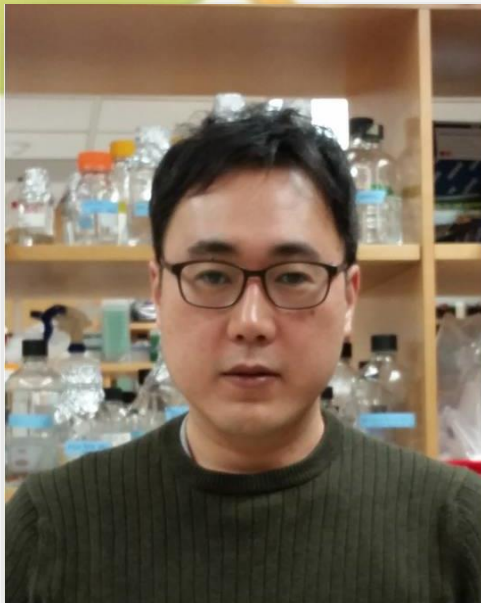
## ALL ARE WELCOME

27 April 2015 (Monday), 11am  
The Auditorium (Level 1)

## Exploring upstream regulators of a cold-induced epigenetic switch

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Joohyun Lee obtained his Ph.D. in Biological Sciences at Dartmouth College (USA) under the supervision of Prof. Mary Lou Gueriot. His thesis work was focused on metal homeostasis in plants. He was a postdoc and currently an Assistant Scientist in Prof. Rick Amasino's lab at the University of Wisconsin-Madison (USA). His current research interests is epigenetic regulation via vernalization in plants and recently published in Nature Communications and PNAS.

Prolonged exposure to winter cold enables flowering in many plant species through a process called vernalization. In *Arabidopsis*, vernalization results from the epigenetic silencing of the floral repressor *FLOWERING LOCUS C (FLC)* via a Polycomb Repressive Complex2 (PRC2)-mediated increase in the density of the epigenetic silencing mark H3K27me3 at *FLC* chromatin. However, the system by which cold perception leads to the induction of vernalization-specific factors involved in *FLC* targeting is largely unknown. In this presentation, I will describe genetic strategies to identify potential upstream regulators of the PRC2 component uniquely induced by cold in *Arabidopsis*.

### Recent Publications:

1. A methyltransferase required for proper timing of the vernalization response in *Arabidopsis*.  
Lee J, Yun JY, Zhao W, Shen WH, Amasino RM. PNAS. 2015 Feb 17;112(7):2269-74.
2. Two *FLX* family members are non-redundantly required to establish the vernalization requirement in *Arabidopsis*.  
Lee J, Amasino RM. Nature Communications. 2013;4:2186.