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日時： 2019 年 12 月 11 日(水) 16:50 – 18:35

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演題: Epigenetic control of cellular reprogramming in plants

Plants display remarkable developmental plasticity and regenerate new organs after injury. Local signals produced by wounding trigger organ regeneration but molecular mechanisms underlying this control are still poorly understood^{1,2}. We investigate how wound stress activates a new transcriptional program to initiate cell fate reprogramming and how chromatin-based regulation contributes to this transcriptional modification. We have previously identified WOUND INDUCED DEDIFFERENTIATION1-4 as central regulators of cellular reprogramming and have shown how they promote shoot regeneration by inducing downstream target genes³. We have also demonstrated that many of these reprogramming regulators need to be epigenetically repressed by POLYCOMB REPRESSIVE COMPLEX 2 to prevent unscheduled cellular reprogramming in intact plants⁴. In this talk I will discuss our latest findings on how wound stress modifies the chromatin landscape and permits global transcriptional activation to promote cellular reprogramming.

参考文献

1. Ikeuchi et al. (2019) *Annu Rev Plant Biol* 70:3.1-3.30
2. Ikeuchi et al. (2016) *Development* 143:1442-1451
3. Iwase et al. (2017) *Plant Cell* 29:54-69
4. Ikeuchi and Iwase et al. (2015) *Nature Plants* 1, 15089

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