



ABSTRACT

“Construction of Arabidopsis gain-of-function lines and characterization of polyploidy mutants”

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As a functional genomics tools we have generated around 70,000 Arabidopsis activation tagging lines and 13,000 Arabidopsis full-length cDNA overexpressor (FOX) lines. These lines were characterized for visible phenotypes with various criteria including rosette leaf size and seed size and summarized in database. These lines were also screened for mutants with altered ploidy. From Activation tagging lines we could obtain several mutants with altered polyploidy and they are classified into two criteria depending on light requirement and hypocotyls morphology in darkness. ILP1 belongs to group1 that has altered ploidy both light and dark-grown seedlings. IPD1 belongs to group2 that has altered hypocotyls ploidy only in dark condition and almost same ploidy levels as wild type in light grown cotyledons.

I will present our recent progress using Arabidopsis and rice FOX lines and also new screening of polidy mutants using these lines..