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Functional study on *Brassica rapa* auxin repressed protein (*BrARP*) gene in *Arabidopsis* plant

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Objectives

Functional analysis of *BrARP* gene and discuss on the *BrARP*-overexpressing *Arabidopsis* plant in relation to auxin-mediated hypocotyl elongation.

Materials and Methods

1. Material

Plant *Brassica rapa* L. spp. *Pekinensis*, *Arabidopsis thaliana*
Agrobacterium strain *pCAMBIA3301*

2. Methods

Brassica rapa auxin repressed protein (*BrARP*) gene was selected from microarray experiments with respect to biotic stresses, light-chilling and heat-shock conditions. *Agrobacterium*-mediated transformation

Results and Discussion

Brassica rapa auxin repressed protein (*BrARP*) gene was selected from microarray experiments with respect to biotic stresses, light-chilling and heat-shock conditions. The *BrARP* was expressed specifically in leaf, but not in any other organs. The expression of the gene was inhibited by light-chilling and heat-shock treatments. Also hypocotyl elongation is a useful model for investigating the regulation of plant growth. We will discuss on the *BrARP*-overexpressing *Arabidopsis* plant in relation to auxin-mediated hypocotyl elongation.

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