Plant Dehiscence Zone-Specific Promoter and Methods of Using Same

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BACKGROUND

Full realization of the potential of many transgenes depends on selective expression in tissues of interest. The following describes a plant promoter isolated from Arabidopsis thaliana that is operative only in the dehiscence zone tissues of plants, and is suitable for driving the expression of genes desired to operate only in this tissue.

TECHNOLOGY DESCRIPTION

A promoter has been isolated from Arabidopsis which upregulates transferred gene expression only in the dehiscence zone on the valve margins, and in no others, when placed upstream of a transgene in a construct of interest. The promoter can also be used to identify and recover orthologues in plant species of interest.

ADVANTAGES

This promoter may have value in the expression of genes intended to control seed pod shatter

STATE OF DEVELOPMENT

Dehiscence zone-specific expression driven by this promoter has now been demonstrated in one species other than Arabidopsis.

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- Use of AGLI I Gene to Suppress Seed Pod Shatter in Commercially Important Plants
- Control Premature Seed-Pod Breakage in Crop Species
- Improved Pod Shattering and Controlled Seed Release Properties

CONTACT

University of California, San Diego
Office of Innovation and Commercialization
innovation@ucsd.edu
tel: 858.534.5815.

INVENTORS

- Yanofsky, Martin F.

OTHER INFORMATION

CATEGORIZED AS

- **Agriculture & Animal Science**
  - Plant Traits

RELATED CASES

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