

Title (en)

METHODS FOR THE IDENTIFICATION OF MODULATORS OF MAGNESIUM CHELATASE EXPRESSION OR ACTIVITY IN PLANTS

Title (de)

VERFAHREN ZUR IDENTIFIZIERUNG VON MODULATOREN DER MAGNESIUM CHELATASE-AKTIVITÄT UND -EXPRESSION IN PFLANZEN

Title (fr)

PROCEDES POUR IDENTIFIER DES MODULATEURS DE L'EXPRESSION OU DE L'ACTIVITE DE LA CHELATASE DE MAGNESIUM DANS LES PLANTES

Publication

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Application

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Abstract (en)

[origin: WO0222857A2] The present inventors have discovered that Mg-chelatase is essential for the growth of *Arabidopsis*. Specifically, the inhibition of Mg-chelatase CHL_H gene expression in *Arabidopsis* seedlings results in varying levels of chlorosis (yellowing), significantly reduced growth and developmental abnormalities. Thus, *Arabidopsis* Mg-chelatase can be used as a target for the identification of herbicides. Accordingly, the present invention provides methods for the identification of compounds that modulate *Arabidopsis* Mg-chelatase expression or activity, comprising: contacting a compound with a *Arabidopsis* Mg-chelatase, or a subunit thereof, and detecting the presence and/or absence of binding between said compound and said Mg-chelatase, or detecting a change in Mg-chelatase expression or activity. The methods of the invention are useful for the identification of herbicides and other compounds that can modulate plant growth and development. In addition, the methods of the invention are useful for the identification of compounds that stimulate the expression or function of Mg-chelatase expression or function. Such compounds can be used to promote or manipulate plant growth and development.

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