



百合誘導啟動子及其應用

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簡歷：<http://www.ppm.ntu.edu.tw/zh/faculty/%E9%99%B3%E6%98%AD%E7%91%A9>

市場需求:

1. 藉由本發明可建立植物分子農場系統，表現所需蛋白質，例如胜肽、抗體、藥物、酵素、荷爾蒙等。
2. 可用以建構植物抗病品種以及病原/逆境指示品種(indicator plant for pathogen/stress)，並應用於植物病害防治之工作。

技術摘要:

本發明為一具有組織特異性、逆境與病原誘導性之啟動子 PLsGRP1，於單子葉及雙子葉被子植物、裸子植物、蕨類中均具有優異表現量，能夠應用於分子農場、分子抗病育種等項目。

優勢:

1. 具有適度基礎表現量，並可受逆境刺激誘導其高量表現。
2. 具有組織表現之特異性。
3. 可優良表現於植物界內不同門之物種中，具有於應用於植物界內各門之特色。
4. 憑藉本發明能夠應用於多門植物物種之特性，僅需建構一組表現構築體，即可快速應用於多種目標植物物種中。

專利簡述:

- (1)專利已獲證，中華民國專利證號：I379903。
- (2)本研究團隊具有數十年研究經驗。

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Inducible promoter of lily and its applications

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Market Needs:

1. Establishment of molecular farming system by using PLSGRP1 to express desired proteins, such as peptides, antibodies, drugs, enzymes, hormones etc.
2. Molecular breeding of disease resistant cultivar and indicator plants for pathogen/stress by using PLSGRP1 for application in plant disease control

Our Technology:

This invention is about a tissue-specific, stress-inducible, and pathogen-inducible promoter PLSGRP1. This promoter drives good expression in monocot and dicot angiosperm, gymnosperm, and fern plants. PLSGRP1 can be applied in molecular farming, molecular breeding of disease resistance etc.

Strength:

1. PLSGRP1 drives constitutive expression of optimum level in plants and induced to high level of expression in stress conditions.
2. PLSGRP1 drives gene expression with tissue-specific trait.
3. PLSGRP1 drives gene expression in different phylum of plant kingdom; thus, PLSGRP1 can be applied in different kinds of plants.
4. One construct with PLSGRP1 is sufficient for application in different kinds of plants.

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