國立臺灣大學技術行銷表

臺大案號: 12A-100111

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產品/技術名稱	百合誘導性啟動子及其應用
發明人/單位	陳昭瑩、林家華 / 植物病理與微生物學系
產品/技術說明	本發明為一具有組織特異性、逆境與病原誘導性之啟動子 P_{LsGRP1}，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。
應用範圍	1. 藉由本發明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. 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)，應用於植物病害防治之工作。
產品/技術優勢	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(kingdom)內不同門(Phylum)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(Phylum)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。
產品/技術 智財權保護方式	專利申請中

Marketing Abstract of NTU's Invention Disclosure

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Title	Inducible promoter of lily and its applications
Inventor (s)	Chao-Ying Chen and Chia-Hua Lin/Department of Plant Pathology and Microbiology
Brief Description	This invention is about a tissue-specific, stress-inducible, and pathogen-inducible promoter P_{LSGRP1}. This promoter drives good expression in monocot and dicot angiosperm, gymnosperm, and fern plants. P_{LSGRP1} can be applied in molecular farming, molecular breeding of disease resistance etc.
Fields of Application	1. Establishment of molecular farming system by using P_{LSGRP1} 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 P_{LSGRP1} for application in plant disease control
Advantages	(when compared to the existing technologies) 1. P_{LSGRP1} drives constitutive expression of optimum level in plants and induced to high level of expression in stress conditions. 2. P_{LSGRP1} drives gene expression with tissue-specific trait. 3. P_{LSGRP1} drives gene expression in different phylum of plant kingdom; thus, P_{LSGRP1} can be applied in different kinds of plants. 4. One construct with P_{LSGRP1} is sufficient for application in different kinds of plants.
IP Right(s)	Patent pending