國立中興大學遴選技術授權投資衍生企業之廠商公告資料表

公告主旨：國立中興大學遴選技術授權投資衍生企業之廠商公告	公告日期：112/01/12
公告編號：111-003(衍)	

公告內容：國立中興大學遴選技術授權投資衍生企業之廠商公告資料表

一、技術名稱：**花卉害蟲防治技術暨資訊整合服務系統**—【2,5-二甲基呋喃花卉蟲害防治燻蒸作業】、【快速建立密閉燻蒸作業環境】、【高效率燻蒸設備】、【新穎天然物質燻蒸劑有害生物防治組合物】、【燻蒸除蟲產業平台】。

二、技術來源：皆為經濟部科研成果價值創造計畫-「建構2,5-二甲基呋喃於蟲害防治之創業計畫」補助成果。

三、投資衍生企業之技術授權內容：

(一) (Know-How) 2,5-二甲基呋喃花卉蟲害防治燻蒸作業：

新穎性燻蒸技術是對人畜低毒性、對植物不產生藥傷的燻蒸劑。因市場上現有之燻蒸劑皆會傷害植物，且對人畜毒性高，皆不適合使用於各類農產品，故現今農產品出口仍面臨嚴重的蟲害問題，時常遭他國檢疫官查出夾帶害蟲並禁止進口，使業者損失慘重。而本團隊研發之新穎性燻蒸技術可解決上述之產業痛點。目前已經完成蝴蝶蘭盆苗出口前燻蒸作業的商業可行性驗證，成功將盆苗輸出至澳洲。在切花方面，亦已完成洋桔梗、文心蘭、及火鶴花的出口前燻蒸場域驗證。

This novel fumigation technology utilizes a fumigant featured with low toxicity to mammals and harmlessness to plants. Because the fumigants currently used in the markets will harm plants and are highly toxic to mammals, they are not suitable for use in all kinds of agricultural products. Therefore, companies are still facing serious pest problems when exporting agricultural products. Customs officials in other countries often find products contaminated with pests and ban the imports. International agricultural industry suffered heavy losses. The novel fumigation technology developed by us can solve these industrial pain points. The business operation of this technology has been verified as it could remove various pests from pots of *Phalaenopsis* spp. before the shipment to Australia as well as cut flowers such as *Eustoma*, *Oncidium*, and *Anthurium* before the shipment to Japan.

(二) (Know-How) 快速建立密閉燻蒸作業環境：

燻蒸劑有別於一般農藥，需要於具有足夠氣密環境才能達到除蟲的效果。本技術可快速於各種場域建立足夠氣密的環境，具有一定高度的技術門檻。並且搭配阻燃安全設施、曝氣裝置等品質確保設施及安全設施，維持作業品質與職業安全。目前已經完成蝴蝶蘭盆苗出口前燻蒸作業的商業可行性驗證，成功將盆苗輸出至澳洲。在切花方面，亦已完成洋桔梗、文心蘭、及火鶴花的出口前燻蒸場域驗證。

Distinct from contact pesticides, fumigants in operation require an airtight environment to achieve the effect of pest control. The technology we developed allows users quickly build an adequately airtight environment in various fields. In addition, this technology is equipped with flame retardant devices and aeration devices to ensure the safety of personnel and to maintain the quality of pest removal. The business operation of this technology has been verified as it could build up airtight environment when operating fumigation for pots of *Phalaenopsis* spp. before the shipment to Australia as well as cut flowers such as *Eustoma*, *Oncidium*, and *Anthurium* before the shipment to Japan.

(三) (Know-How) 高效率燻蒸設備：

本技術係有助提升本團隊開發之新型燻蒸劑使用效率及安全性之燻蒸設備。

本技術提供每小時蒸散率大於 5 公升燻蒸設備於 20 呎貨櫃進行燻蒸，搭配花卉冷鏈作業，提升擴散效率縮短作業時間，減少花卉包裝出口作業障礙，增加作業便利性及減少環境變因降低風險，優化程序以配合農產品出口運輸作業。目前已經完成蝴蝶蘭盆苗出口前燻蒸作業的商業可行性驗證，成功將盆苗輸出至澳洲。在切花方面，亦已完成洋桔梗、文心蘭、及火鶴花的出口前燻蒸場域驗證。

This technology refers to fumigation devices that help to improve the efficiency and safety of the new fumigants developed by us. The rapid evaporation device is able to evaporate more than 5 liters of fumigant per hour and is suitable for fumigation operation in a 20-foot container. To meet the cold chain operations for cut flowers, the circulation efficiency can be improved and the operation time can be shortened by using this device. Hence, using this device can reduce the obstacles and risks in operation and increase operational efficiency. The business operation of this technology has been verified as it could remove various pests from pots of *Phalaenopsis* spp. before the shipment to Australia as well as cut flowers such as *Eustoma*, *Oncidium*, and *Anthurium* before the shipment to Japan.

(四) (Know-How) 新穎天然物質燻蒸劑有害生物防治組合物：

天然物質燻蒸劑發展趨勢為以環境友善、人畜無害及植物無傷進行害蟲防治方式。由於天然物質燻蒸劑的安全性高，在推廣使用上將深具優勢，除可降低蟲害減少農產品倉儲損失外，更能同時保障食品安全與環境友善，符合國家的長期農業政策，同時持續開發維持團隊競爭力與優勢。本團隊已著手透過大規模篩選天然物質，目前發現胡椒、薄荷、花椒精油等辛香植物萃取液具有燻蒸毒殺昆蟲的性能。

The development trend of natural material fumigants is to control pests in an environment-friendly, harmless to humans and animals and harmless to plants. Due to the high safety of natural fumigants, it will have great advantages in popularization and use. In addition to reducing insect pests and reducing storage losses of agricultural products, it can also ensure food safety and environmental friendliness at the same time. It is in line with the country's long-term agricultural policy and continues to be developed and maintained Team competitiveness and advantages. Through large-scale screening of natural substances, it has been found that the extracts of spicy plants such as pepper, mint, and Zanthoxylum essential oils have the properties of fumigation, poisoning and killing insects.

(五) (Know-How) 燻蒸除蟲產業平台：

燻蒸除蟲產業平台係促成燻蒸服務使用者、提供燻蒸服務之單位、與提供燻蒸劑等實體商品及教育訓練之企業，三方合作與交易之軟硬體結合之場所與環境。需整合企業及服務說明、商品服務資訊系統、燻蒸服務訂單系統及自動工作表單介面，提供使用者與認證服務單位滿足價值需求之途徑，並且由介面明確化使用者需求，以標準化燻蒸作業程序提供高品質之燻蒸服務，此平台有益於發展業務、創造價值網絡效益及未來進行技術輸出於其他國際市場。

The fumigation business platform is a place and environment that combines software and hardware for tripartite cooperation and transactions between users of fumigation services, groups providing fumigation services, and companies that provide fumigants and other physical products and occupational skills training. The platform integrates descriptions and service of companies, product information, service order system, and work scheme generation system to provide a way for companies and certificated service groups to satisfy the market needs. Also, the platform clarifies users' needs through the interfaces and provides high-quality fumigation services with standardized procedures. The operation system of this platform may be applied to international

markets in the future.

四、計畫執行機關/系所：國立中興大學生物科技學研究所
技術發明人：孟孟孝 教授等。

五、廠商資格及繳交資料

(一)廠商業別：農業服務、農業栽培、農藥零售批發業者、環境清潔。
(二)應具備之專門技術：燻蒸技術。
(三)應有之機具設備：蒸散設備、冷鏈設施。
(四)應有之研究或技術人員人數：3人。
(五)其他：無。

六、公開方式

(一)技術資料於網際網路上公開。
網址：國立中興大學首頁 https://www.nchu.edu.tw/index
國立中興大學產學研鏈結中心 http://www.gcaic.nchu.edu.tw/index.php
(二)逕向國立中興大學產學研鏈結中心創業育成組(興創基地)許小姐索取相關資料。

七、申請方式

(一)至官網下載申請表格，填妥後送至本校。
(二)亦得逕至本校索取技術資料及申請表格。
(三)辦公室位置：臺中市南區興大路145號(興創基地1F 創業育成組辦公室)。
(四)承辦人：許小姐。
聯絡電話：(04)2284-0832 ext.210 / E-mail：jane2017@nchu.edu.tw