



高效普及型農藥快篩檢驗系統

主要領域 創新檢測技術

產品/技術簡介

- 以高精確度酵素展示法建立農藥快篩檢測系統

應用：蔬果農殘篩檢

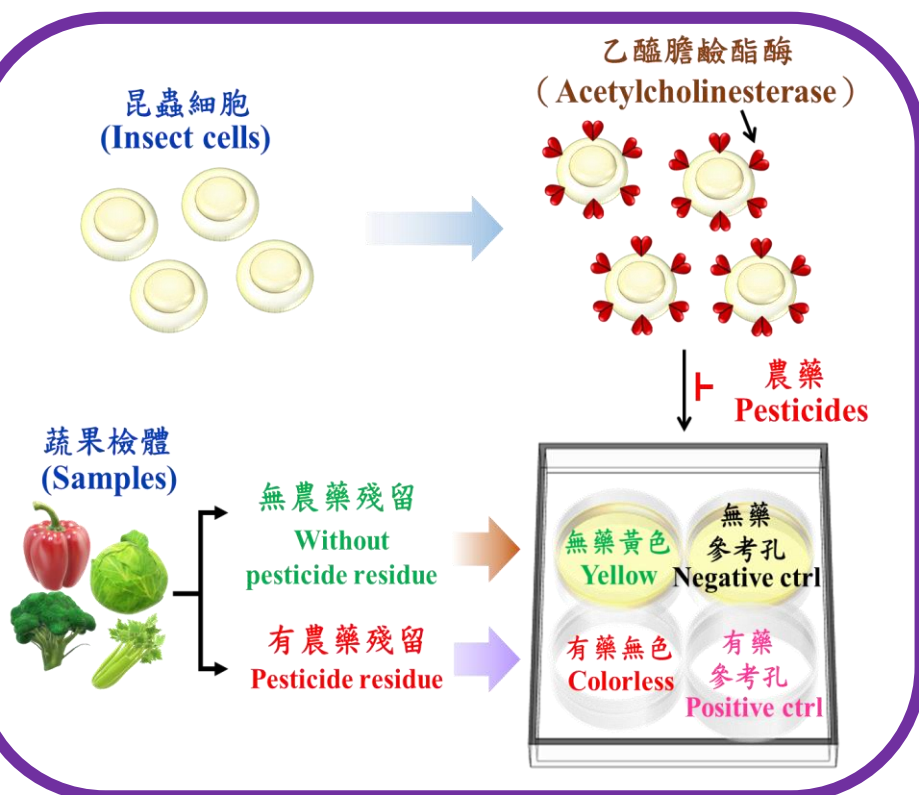
- 本發明將乙醯膽鹼酯酶展現於昆蟲細胞膜上，以檢測常見的市售農藥殘毒—有機磷劑與氨基甲酸鹽類殺蟲劑。
- 創新細胞表面展示系統能夠在定量的細胞上大量生產乙醯膽鹼酯酶，並在乾燥後維持其完整結構和酵素活性以利貯存運送。

優勢

- 相較於氣液相層析儀分析法，本系統之檢測成本低且省時，更免除了傳統生化法自蒼蠅進行酶萃取、需要純化回溶之不便，可提供政府機構、商場及民眾一個簡便、快速準確且經濟實惠的農藥殘毒快篩新選擇。

專利現況

- PCT 19P0490(19Q0371), issued at 2019/10/18



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Rapid Residual Pesticide Screening & Detection System

Research Area Innovative Detection Technology

Technical statement

- Establish a rapid screening and detection system for pesticides through high-precision enzyme display technology.

Applications: *Pesticide Residue Detection*

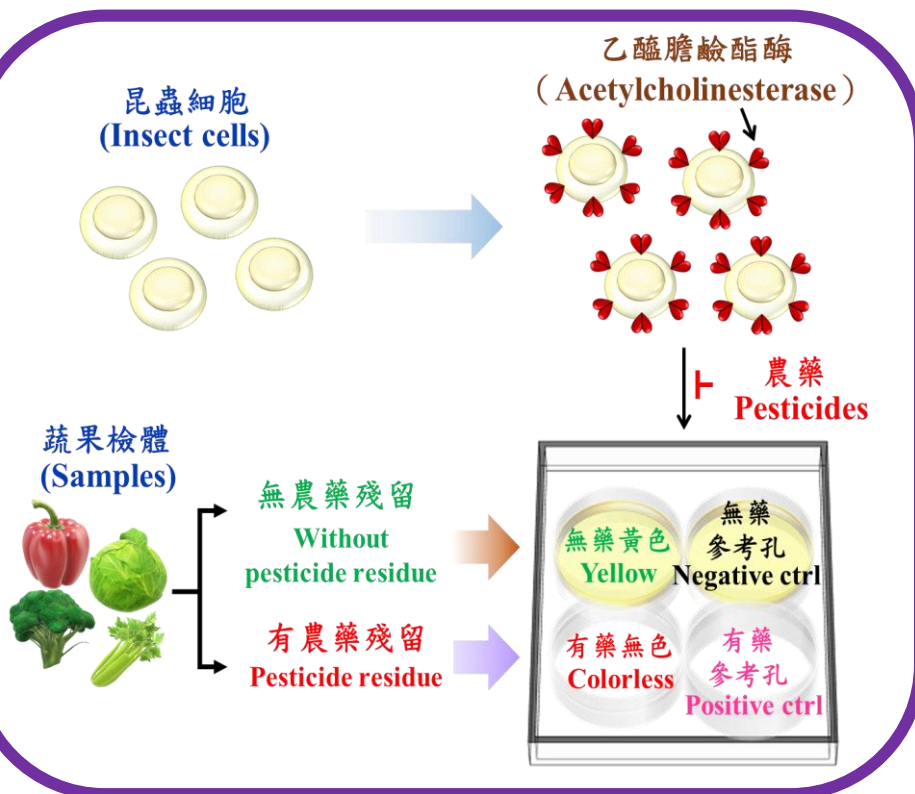
- We have displayed acetylcholinesterase (AChE) on insect cell membrane for the detection of organophosphate and carbamate pesticides residues.
- AChE on cells can be dried for easy storage and transport.

Advantages

- Saves cost and time compared to GC-MS and LC-MS analyses. It also avoids the need of enzyme extraction and purification from flies, which are necessary for conventional biochemical methods. Therefore, this is a fast, accurate and economical choice for the screening of pesticide residue.

Patent status

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