

VIRUS

FREE CYMV PHALAENOPSIS YUKIDIAN VIA MICROPROPAGATION

Nguyen Ngoc Quynh

Phalaenopsis is an important economic orchid for cut-flower exporters in Vietnam. Cymbidium moraic virus (CyMV) is the most dangerous disease, which seriously damaged orchids. The study used RT-PCT tool, bioreactor and meristem shoot tip culture to set up the appropriate protocol how to develop virus free CyMV *Phalaenopsis* Yukidian seedlings. The study shows that using primers Ph.CM-f /r could detect the presence of CyMV in *Phalaenopsis* Yukidian via highthroughput RT-PCR. The meristem tip tissue culture (1mm) from the CyMV infected mother plant that will reproduce virus-free plants without heat treatment. *Phalaenopsis* plantlets of virus-free seedlings can be produced from the following source: i) in vitro leaf tissue culture from non-infected shoots; (ii) shoots directly produced from axis of non-infected mother plants; (iii) meristem tip tissue culture of CyMV infected mother plants. The temporary immersion bioreactor system (TIBS) of RITA's is suitable for the virus free *Phalaenopsis* shoot propagation and plantlet production.

