

IP MARKETPLACE

CONNECTING INNOVATION TO YOUR BUSINESS

TECH OFFER

PLANT VIRUS PROTECTION SOLUTION



▶ MORE INFORMATION

MEGA-TREND

- Environment and Water
- Nanotechnology
- Agriculture

TECHNOLOGY READINESS LEVEL (TRL)

- TRL 2 (Lab discoveries)

PATENT/ GRANTED NUMBER

- MY-154890-A

▶ TECHNOLOGY OVERVIEW

Orchids are economically important flowers that are vulnerable to cymbidium mosaic virus (CYMMV). A method aimed at protecting orchid plants using SIRNA targeted to CYMMV was studied. E.coli ht115 cells were transformed with plasmid vectors containing partial sequence of the CYMMV coat protein gene and used to produce sense and antisense RNA of the CYMMV coat protein gene. The protective effect of these RNA molecules was tested on tissue-cultured orchids during the potting stage, which is the stage where the orchids are most vulnerable to virus infection. Quantitative real time PCR showed that the expression levels of the virus transcript in plants inoculated with both CYMMV and double stranded CYMMV coat protein RNA was significantly lower than plants inoculated with virus alone and was comparable to that of the non-infected plants.

It is suggested that once DSRNA enters the cells. It is processed into small interference RNA (SIRNA) that will activate the silencing pathway and inhibit the replication of virus. In all, this study suggests that mechanical inoculation of CYMMV coat protein gene DSRNA provides an easy, fast, effective and inexpensive way to protect orchids against CYMMV.

CONTACT US!

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