Orn-usa Loythala 2006: Chemotherapy for *Cymbidium Mosaic Virus* (*CymMV*) Elimination in Some Commercial Orchids. Master of Science (Agricultural Biotechnology), Major Field: Agricultural Biotechnology, Interdisciplinary Graduate Program. Thesis Advisor: Assistant Professor Surawit Wannakrairoj, Ph.D. 131 pages. ISBN 974-16-2626-6

CymMV-infected protocorm-like bodies (PLBs) of *Mokara* Chark Kuan (*Mkra*.), *Oncidium* Gower Ramsey (*Onc*.) and *Dendrobium* Sonia 'Ear-sakul' (*Den*.) were cultured in liquid media to determine their tolerance to 2 virucides; 0, 0.075, 0.10 or 0.125 mM Ribavirin followed by 0.10, 0.15, 0.20 or 0.25 mM DTU. The results showed that the PLBs of *Mkra.* could grow for the longest period in the media with 0.075 mM Ribavirin then 0.15 mM DTU. The second longest period was from the PLBs in the media with 0.125 mM Ribavirin then 0.15 or 0.20 mM DTU. The PLBs of *Onc.*, on the other hand, could grow for the longest period in the media with 0.075 mM Ribavirin followed by 0.10 mM DTU. The second longest period was from the PLBs that transferred to 0.15 mM DTU. While, the PLBs of *Den.* could grow for the longest period in the media with 0.075 mM Ribavirin then 0.15 and 0.20 mM DTU. The second longest period was from the PLBs in the media with 0.125 mM Ribavirin then 0.15 mM DTU. When using ELISA and RT-PCR techniques, the first generation PLBs (C_1-PLBs) of *Mkra*. from the media with 0.075 mM Ribavirin for 3 weeks then 0.15 mM DTU for 20 days were 12.5 % *CymMV*-free. After the *CymMV*-infected C_1-PLBs were subjected to the best chemotherapy method for the second time, the second generation PLBs were 50 % virus-free. The C_1-PLBs of *Onc*. , on the other hand, reached 61.29 % virus-free after cultured in the media with 0.10 mM Ribavirin for 3 weeks the 0.10 mM DTU for 40 days. While the C_1-PLBs of *Den*. were 100 % virus-free after cultured in all media for 114 and 117 days.

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