



J. Roslina* & G. Jualang Azlan

School of Science and Technology, Universiti Malaysia Sabah,
Locked Bag 2073, 88999 Kota Kinabalu,
Sabah, Malaysia.

*Author for correspondence: roslinajawan@yahoo.com

Establishment of Micropropagation Techniques of Borneo's Endemic Scented Orchids, *Vanda dearei*

Borneo is in the midst of one of the richest floristic regions on earth and referred to as the "Orchid Island". *Vanda dearei* is one of the endemic orchid's species in Borneo. Its have a wide market of cultivation with large, pale yellow and strongly scented flowers make this one of the least beautiful of Vandas. Its epiphytes and can only flourish in a climate of high rainfall with no prolonged dry season. The pods of *V. dearei* were rarely formed because of the flower are not usually pollinated itself. Simple and efficient procedures were successfully established for clonal micropropagation of this species and provide a sterile starting culture material. Here we reports the *in vitro* seeds germination followed by the protocorms development and proliferation. Throughout these studies, several factors were considered such as basal media, complex additives, sugars and plant growth regulators. Data was collected by calculating the germination percentages, growth index, no of new protocorms produced, no of shoots and no of roots. The best treatment from the seed germination study was further modified to optimize the nutrient requirement for protocorms proliferation and development. Preliminary, results shown that seeds of *V. dearei* were successfully germinated well on Knudson C basal medium supplemented with 0.2% (w/v), yeast extract, 0.2% (w/v) sucrose (pH media is 5.3), grown under 24h light. After that, the protocorms formed form the germination study were proliferated well and produced a high number of new protocorms when cultured on the medium with the combination of NAA and BAP hormones. On the other study, with the addition of 20% (v/v) coconut water, the healthy seedlings were effectively formed.