



International Conference on Engineering, Trends in Engineering,  
Science, Humanities and Management (ICETESHM – 2024)

31<sup>st</sup> March, 2024, Karlo Bagh, New Delhi, India.

CERTIFICATE NO: ICETESHM /2024/ C0324317

## A STUDY OF PROPAGATION TECHNIQUES FOR AERIDES ODORATA AND VANDA TESSELLATA

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### ABSTRACT

Propagation techniques for *Aerides odorata* and *Vanda tessellata* are essential for their conservation, commercial cultivation, and sustainable utilization. Both species are epiphytic orchids known for their fragrant flowers and medicinal properties. They can be propagated through both sexual (seed propagation) and asexual (vegetative) methods. Seed propagation is challenging as orchid seeds lack endosperm and require symbiotic mycorrhizal fungi for germination. However, in vitro techniques like asymbiotic seed germination on nutrient-rich media, such as Murashige and Skoog (MS) medium, enhance seedling survival. Micropropagation through tissue culture, including shoot tip culture and protocorm-like body (PLB) induction, ensures mass propagation with high genetic uniformity. Vegetative propagation methods, including division of mature plants and keiki (offshoot) culture, are also effective. Keiki formation can be induced using cytokinins like benzylaminopurine (BAP), promoting lateral shoot development. Stem cuttings with aerial roots can be planted in well-drained media, such as coconut husk or tree bark, to encourage new growth. These propagation techniques support ex situ conservation efforts, aiding in habitat restoration and commercial production. Given their vulnerability to habitat loss and overcollection, optimizing propagation methods ensures the long-term survival and sustainable use of *Aerides odorata* and *Vanda tessellata*.