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Physiology of Ornamental Plant Laboratory



Under the direction of
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Special Research Units

- Photosynthesis
- Endogenous hormones in relation to growth and flowering
- Sugar metabolizing enzyme activity in relation to growth and development

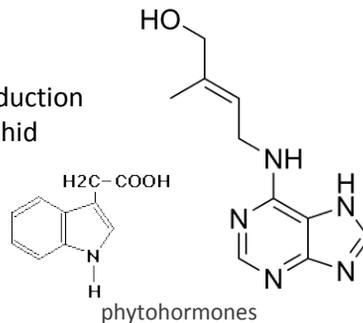
Research Areas

- Physiology of ornamental plants production
- Flowering control in *Dendrobium* orchid
- Environmental physiology
- Plant ability to improve air quality

Research Programs

➤ Orchid

Orchid is an important part of the Thailand's economy, but the produced quantity varies greatly throughout the season and thus not always related to market demand. We need to solve this problem, so plant physiology, biochemistry and anatomy are used to understand the mechanisms of growth and flowering, especially in *Dendrobium*. In addition, our interest in conservation and propagation (e.g. *in vitro* method) of orchids.



Sub-project: Study on Physiology Production of Globba for Commercial



Project plan: Development of Zingiberaceae for Export

➤ Globba

Globba has a high potential for promoting to a new ornamental plant as cut-flower and potted plant due to it has beautiful inflorescence, which is different in each species, and long vase life. Growers can produce and sell them from May to August because there is dormancy period during winter. However, the factors affecting dormancy are still unknown. We are trying to find out dormancy causes and methods of breaking rhizome dormancy, including the appropriate technology for cut-flower and rhizome production all year round. In the near future, we suppose that globba will be popular both in the domestic and export markets.

➤ Foliage plants

Air quality is a major concern for the cities. We applied the knowledge of photosynthesis, i.e. plants convert CO₂ into O₂ in order to improve air quality, especially indoor condition (low light and water deficiency). Foliage plants such as aglaonema, bromeliad, ficus, philodendron were studied using photosynthetic parameters, plant anatomy and morphology to evaluate the ability of plants to improve air quality.

