

OR-45**Bioprospecting of Freshwater Macrophytes for Bioactivity**

Chai TT*

Department of Chemical Science, Faculty of Science, Universiti Tunku Abdul Rahman, Jalan Universiti, Bandar Barat, 31900 Kampar, Perak, Malaysia; E-mail: chahtt@utar.edu.my

The vast flora diversity of Malaysia is an important advantage where bioprospecting for bioactive natural products is concerned. Published work evaluating the bioactivities of local flora has often focused on popular medicinal or edible plants, which are largely terrestrial species. By contrast, macrophytes (aquatic plants growing near or in water), especially those not popularly used as folk remedies or food, are often underexplored. My research focuses on evaluating the therapeutic and bioherbicidal potential of freshwater macrophytes, which abound in the Kinta Valley region of the State of Perak, Malaysia. In this presentation, I will present the research findings of my group on two macrophytes: *Typha domingensis* and *Eichhornia crassipes*. Studies carried out in my laboratory revealed that these macrophytes are potential sources of water-soluble antioxidants, iron chelators, glucosidase inhibitors, as well as bioherbicidal agents. Such bioactivities can be correlated to the phytochemical contents, e.g. polyphenols, flavonoids, hydroxycinnamic acids, and proanthocyanidins, of the macrophytes. Notably, both of these macrophytes are invasive weeds of global importance. Discovery of bioactivity in these aquatic weeds may contribute towards promoting their use as bioresources for therapeutic and bioherbicidal agents, hence providing an alternative to the challenging task of eradicating these weeds.

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