



## ***Melaleuca alternifolia*: A review of the medicinal uses, pharmacology and phytochemistry**

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**Abstract:** *Melaleuca alternifolia* also known as Tea tree oil belonging to family Myrtaceae. This plant has diverse and therapeutic uses in traditional herbal medicine for treating Skin care, First Aid, Household Cleaning, Hair care, Aromatherapy, Feminine care, Chronic illness, and Dental care in Australia. Phytochemical investigation shows that *Melaleuca alternifolia* consists of terpenoid hydrocarbons, such as monoterpenes, sesquiterpenes, and their associated alcohols. Studies indicate *Melaleuca alternifolia* possesses various pharmacological activities such as Anti-anxiety, Antibacterial, Antioxidant, Antimycotic and Antimicrobial, Antiviral, and Anti-inflammation and Antiprotozoal. The finding of toxicity study topical use of the oil is relatively safe, and that adverse effects are minor and occasional TTO is toxic if ingested in higher doses and can cause skin irritation at higher concentrations. However, further research on chemical components and their mechanism of action show biological activities which are required to clarify the complete phytochemical profile and assess to confirm their suitability for future drugs. These reviews summarize the pharmacology and phytochemistry and medicinal uses of *Melaleuca alternifolia* to reveal its therapeutic effects.

**Key Words:** *Melaleuca alternifolia*, Phytochemical, Monoterpenes, Antiviral.