Project Overview

An updated evidence map on applications, efficacy, and safety of tea tree oils

June 2020 - July 2021

Background

Tea tree oil has a long history of use in Australia and is now sold and used internationally as a natural antimicrobial, renowned for its purity and quality. Over the years many new applications have been developed and research on tea tree oil has increased substantially. For the long-term sustainability of the industry and continued growth, this new study will determine the current status of tea tree oil and research and the development of new applications.

Objectives

This project aims to review the current applications of tea tree oil, its functionality and the mechanisms associated with its effects. It aims to educate consumers and health care providers about the effectiveness and safety of tea tree oil, and provide specific recommendations for its use in different scenarios. This project will identify and highlight gaps in current research, and provide recommendations for new product formulations, and future research.

Research

A systematic literature review will be conducted, assessing the available published evidence. In line with state-of-the-art guidelines, standard scientific literature databases (across a range of disciplines biology, chemistry, pharmacy, health and medical sciences) will be searched for research related to tea tree oil. The identified literature will be reviewed, and the findings summarised according to the various topic areas including chemistry, basic science, and clinical research.

This work will produce various materials, for various audiences, to communicate the efficacy and safety of tea tree oil, and its various uses and applications including:

- For researchers, a scientific summary will be published. This review will not only provide a rigorous appraisal of the evidence on the effects of tea tree oil, but highlight significant research gaps. It will be published in a peer-reviewed open-access journal, and presented at national and international conferences to ensure high reach and visibility.
- A review of the current use and applications of tea tree oil, its functionality and the mechanisms associated with its effects will also be developed and published in plain English for non scientific audiences including consumers.

Separate summaries will also be developed for its potential applications, including but not limited to the antibacterial, antiviral, antifungal, antimicrobial, anti-inflammatory and anti-cancer activity, providing evidence for such applications, and specific recommendations for its use.

Based on the findings, ideas and recommendations will be developed and summarised for innovative formulations and products around tea tree oil.

Expected outcomes and implications

Together these publications aim to educate consumers as well as a professional audiences on the published clinical and scientific evidence available on tea tree oil. It will provide a guide for new product development forumulations, and in the longer-term increase market demand for Australian tea tree oil through research and development.

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