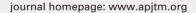


IF: 1.634

Asian Pacific Journal of Tropical Medicine





doi: 10.4103/1995-7645.243084

©2018 by the Asian Pacific Journal of Tropical Medicine. All rights reserved.

Tropical herbs and spices from Mauritius as alternative biomedicine to manage communicable and non-communicable diseases

Fawzi Mahomoodally[™]

Department of Health Sciences, Faculty of Science, University of Mauritius, Réduit, Mauritius

ABSTRACT Mauritius, is a famous touristic tropical island that forms part of the Mascarene Islands in the Indian Ocean. The Island is also well known for its rich cultural and ethnic diversity and for its singular flora and fauna. The local population has been relying on traditional medicine including the use of endemic and indigenous plants, herbs and spices as alternative and complementary medicine for the management of common ailments. Indeed, tropical herbs and spices have always been an important source of lead compounds in the drug discovery process. Such traditional system of medicine has been increasingly used for therapeutic purposes against a panoply of human diseases globally. Over the past years, attempts have been made to document such uses and to validate these traditional claims. This presentation will endeavour to highlight recent progress on the use of herbs and spices in the treatment and/or management of common communicable and non-communicable diseases in light of ethnopharmacological and epidemiological surveys, and in vitro, in vivo and in silico lab-based studies. The ethnopharmacological/epidemiological investigations have led to documentation of several exotic, indigenous and endemic medicinal plant and animal remedies commonly used by Mauritians in the management of diabetes, pain, infectious diseases, against women and paediatric ailments. In vitro and in vivo studies have attempted to validate against non-communicable diseases via inhibition properties against enzymes of clinical relevance (amylase, glucosidase, lipases, and cholisterases). Enzymes kinetics studies have been conducted to determine the mode of inhibition and in silico molecular docking studies used to provide additional insights on the mode of binding of bioactive compounds from the plant extracts and the target enzymes. The plants have also been studied against infectious diseases via evaluation of bacteriostatic and bactericidal activities against pathogenic and antibiotic-resistant strains, biofilm eradication potential, and antibiotic potentiating activity). Data amassed so far from the Mauritian flora has shown that the local tropical biodiversity can be an important sustainable source of biomedicines for future drug development programs.

Keywords: Mauritius; *In vitro*; *In silico*; Mascarenes Island; Indian Ocean; Traditional medicine

Article history:
Received 10 September 2018
Received in revised form 12 September 2018
Accepted 26 September 2018
Available online 15 October 2018

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-Share Alike 3.0 License, which allows others to remix, tweak and buid upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

For reprints contact: reprints@medknow.com

©2018 Asian Pacific Journal of Tropical Medicine Produced by Wolters Kluwer- Medknow

How to cite this article: Mahomoodally F. Tropical herbs and spices from Mauritius as alternative biomedicine to manage communicable and non-communicable diseases. Asian Pac J Trop Med 2018; 11(10 suppl):19.

First and Corresponding author: Fawzi Mahomoodally, Department of Health Sciences, Faculty of Science, University of Mauritius, Réduit, Mauritius.

E-mail: f.mahomoodally@uom.ac.mu