

production inhibitors from *Garcinia livingstonei* (Clusiaceae).

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Abstract

ETHNOPHARMACOLOGICAL RELEVANCE:

The stem bark of *Garcinia livingstonei* is used traditionally as a skin lightening agent.

AIM OF THE STUDY:

To isolate and identify compounds responsible for the observed skin lightening activity of *Garcinia livingstonei* and to evaluate their cytotoxicity.

MATERIALS AND METHODS:

Constituents of the stem bark and fruits of *Garcinia livingstonei* were isolated using chromatographic techniques and structures were determined using 1D and 2D NMR and MS analysis. MeWo cells were used to evaluate the cytotoxicity and impact on melanin levels of extracts and compounds isolated, in vitro.

RESULTS:

Twelve known compounds, morelloflavone (1), morelloflavone-7 -sulphate (2), guttiferone A (3), sargaol (4), isojacareubin (5), 6-deoxyisojacareubin (6) and in addition to the common triterpenoids, betulin, betulin aldehyde, lupeol, lupenone, euphol and stigmasterol were isolated in this investigation. Morelloflavone, morelloflavone-7 -sulphate and sargaol, were found to be considerably less cytotoxic and more effective as skin lightening agents than hydroquinone.

CONCLUSIONS:

A range of compounds was isolated from the stem bark and fruit of *Garcinia livingstonei*. Although the bark extract contained the cytotoxic guttiferone A, it was found to be less toxic than hydroquinone, and morelloflavone, the 7 -sulphate derivative and sargaol show potential for development as depigmentation/skin lightening agents.