Reviewer's report

Title: Screening of anti-dengue activity in methanolic extracts of medicinal plants

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Reviewer: Claire Kubelka

Reviewer's report:

1. Comments: The authors intend to investigate the antiviral activities from several extracts from medicinal plants using cell cultures infected with Dengue virus -1.

   The question posed is well defined and relevant.

2. Major Compulsory Revisions: The methods are well described with respect to the extraction procedures, component contents, toxicity properties, virus propagation and titration and antiviral assay used. However some points are missing:

   c. the origin of the Dengue 1 virus, although authors prove characteristics of this virus.

   d. the plant origin including data of collected area and data for species classification.

   In my opinion the assay used that detects qualitatively the viral cytopathic effect on cell cultures are not sufficient to determine the antiviral activities of compounds. It may serve as initial screening but the activities should be confirmed by another method. In the literature antiviral activities against Dengue viruses has been tested by methods such as: inhibition of plaque forming assay, colorimetric assays such as MTT or MTS/PMS, dengue reporter virus, quantitative PCR (Kaptein et al., 2010) RNAs or helicase activities, (Qing et al., 2010) Focus forming unit (FFU) reduction assay (Rees et al., 2008), flow cytometry (Lee et al., 2006) among others.

   I recommend the use of another method in order to confirm the suggestive antiviral activities found during this work.

The manuscript mentions to the relevant standards but no data deposition or plant voucher are mentioned.

References

A derivate of the antibiotic doxorubicin is a selective inhibitor of dengue and yellow fever virus replication in vitro. Antimicrob Agents Chemother 54, 5269-5280.

