Reviewer's report

Title: A water extract of Brazilian green propolis has a laxative effect via activation of acetylcholine receptor

Version: 1 Date: 18 April 2012

Reviewer: M. Nabeel Ghayur

Reviewer's report:

The authors have presented some very interesting data into the in vivo and in vitro effects of water and ethoanol extracts of Brazilian green propolis. The data is interesting due to the fact that the authors have backed up their in vivo findings with in vitro investigation into the mechanism of action of the extract.

The paper deserves publication in the journal but there are some aspects the authors need to work on before this is published:

Major:
1. The authors show that the water extract shows laxative potential and not the ethanol extract. Please discuss in a little detail, in the discussion section, as to which of the known chemicals (in the water extract) might be responsible for the observed effects (support your argument by using available references in the literature)

2. The water extract reverses clonidine induced constipation but not loperamide induced constipation. The authors have given a bit of argument in this regard in the discussion but this is not enough, please elaborate!

3. It is very unusual for a substance that is showing increased stool formation, reversing clonidine induced constipation, and has direct stimulant effect on isolated intestinal jejunal smooth muscle preparation to not have any significant stimulant effect on intestinal transit? Please explain!

Minor:
1. Background, last paragraph: the authors say that propolis has a traditional use as a 'laxative' agent; please give a reference for this claim!

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests