Author's response to reviews

Title: Liquid and vapour-phase antifungal activities of selected essential oils against Candida albicans: Microscopic observations and chemical characterization of Cymbopogon citratus

Authors:

Amit K Tyagi Mr (amittyagiiitd@gmail.com)
Anushree Malik Dr (anushree_malik@yahoo.com)

Version: 2 Date: 12 October 2010

Author's response to reviews: see over
Reference: MS: 9825583604339377 - Liquid and vapour-phase antifungal activities of selected essential oils against Candida albicans: Microscopic observations and chemical characterization

Dear Dr. Pafitis,

Please find herewith the response to editorial and reviewer’s comments on the above-referred manuscript. The changes made as per the comments have been highlight in green colour. The revised manuscript is being uploaded.

Kind regards
Amit Tyagi

Response to Editorial Comments:

(1) Provide context information in the background section of your abstract, in addition to the aims of your study.
DONE

(2) Remove the abstract from your title page in your manuscript and place this in the following page.
DONE

Please also highlight (with 'tracked changes/coloured/underlines/highlighted text) all changes made when revising the manuscript to make it easier for the Editors to give you a prompt decision on your manuscript.

CHANGES MADE AS PER THE COMEMNTS HAVE BEEN HIGHLIGHT IN GREEN COLOUR.

Response to Reviewer's Comments

Reviewer's report
Title: Liquid and vapour-phase antifungal activities of selected essential oils against Candida albicans: Microscopic observations and chemical characterization
Version: 1 Date: 7 September 2010
Reviewer: Sydney Alves

Reviewer's report:
Minor essential Revisions:
The authors must always write "essential oil" ; in this context the word "oil" without "essential" does not sound correct.
The suggested correction has been done throughout the revised manuscript.

The authors must include the scientific names of lemongrass, mentha and eucalyptus in the first time that mention it.

Done

Page 5 - Pseudomonas aeruginosa: require correction

Done

Page 6 - Why did the authors not determine MICs from broth macrodilutions? It would be more reasonable than employ agar dilution method. The MFCs would be determined from that concentrations (previously used by MICs determination) where growth was not observed.

For determining the MICs the broth macrodilution method has also been used. The results (MICs) with the agar dilution as well as broth macro dilution method have been shown in Table 1. Agar dilution method has been used previously by other authors (Devkatte et al., 2005) to determine the MIC for essential oil. Hence for comparison it has been included in the present manuscript also.

Suggested correction has been done in revised manuscript. The MFC values of all these essential oils were found to be higher than the MICs.

Page 8 - "Disc volatilisation assay": this technique was not referenced; was it standardized by the authors? Was it published? The authors must include a reference for this assay.

This technique was reported by Lopez at al. (2005). Reference has been included in the revised manuscript.

Page 9: "The preparation of C. albicans samples for morphological study" requires references.

It was standardized by the authors themselves. It is already published in journal of "Micron" (Tyagi and Malik, 2010). Reference has been included in revised manuscript.

Page 13 - LGO - this and other abbreviations would be established in Material and Methods.

The abbreviation LGO has been removed from the manuscript.

Page 19 - Lippia sidoides - put it in italic

Done

Page 20 - "Lemmon grass oil vapour may be considered as a potential agent for preventing Candida invasion and subsequent infections". This statement must be deleted because the study did not evaluate the essential oils ability to preventing candidiasis infections or invasion. Remember that candidiasis are opportunistic fungal infections which depend from immunological status of the patients.
As per reviewer suggestion, the above statement has been deleted from Page 20 as well as from abstract.

Table 1 - We suggest the title or similar: "MICs and MFCs of mentha essential oil, eucalyptus essential oil and lemon grass essential oil obtained by different methods". 
As per reviewer suggestion, the required change has been done.

Table 3 - I think this table is not necessary because some MICs for comparisons may be cited in the text; some MICs included show different units (mg/L ; %). Table 3 is on the basis of literature survey with respect to MIC of already studied essential oils/active components against C. albicans. Hence, the MICs show different units. Since the text is already too long, the authors wish to retain Table 3 for quick referral and comparison of the results with reported data. However, in view of the reviewer’s comments, rows depicting values in % have been deleted from Table 3.
Institute of Technology Delhi, New Delhi (India). Required change has been done in revised manuscript.

- in “Chemical and Strains” the sentence “mostly chemicals were purchased from Himedis,…Merck, etc. The authors must include the complete references and not “etc”. Done

- Reference antifungal compound must be used as standard antifungal drug;
Standard antifungal drug was not used in this study, as the main aim was to differentiate the efficacy of essential oils in liquid and vapour phase. Further, being standard strain, the information on susceptibility towards standard antifungal drugs is already available.

- the determination of the MFC is not according the NCCLS M27-A (reference 21), including the broth medium( pag. 6.);
The methodology reported by Devkatte et al. (2005) was used for determining the MFC of \textit{C. albicans}. Now correct reference has been cited in the revised manuscript.

- the identification of compounds of the essential oil is not very clear. The authors must identify the constituents on the basis of their GC retention indices and by matching their mass spectra with their home-made library mass and MS reference libraries. The authors don’t have their own data bank? A correct identification is not possible using only literature and databases values!

For the identification of the main compounds of lemon grass essential oil certain pure standards have also been run by the authors but for the identification of all the components, database values have been used. In the literature several authors have reported the identification of compounds using literature and databases values (Bozin et al. 2008, Guo et al. 2008, Maggi et al. 2009, Celiktas et al. 2009). Nevertheless, reviewer’s point is well taken and shall be incorporated in our future work.

- Citral is a mixture of two isomers: neral (citral B) and geranial (citral A). In my opinion the author must use these denominations.
Done

- The authors must replace neryl alcohol by nerol.
Done

GC, and GC-MS is the correct abbreviation of Gas Chromatography and Gas Chromatography-Mass Spectroscopy (see abstract).
Required changes have been done.
The compounds (ex thymol, menthol,...) should not be written in capital letters. The title of the manuscript must include the name of the plant oil (Cymbopogon citratus). 

Done