Reviewer's report

Title: The in vitro antifungal activity of flavonoids against Trichophyton rubrum is due to the inhibition of fatty acid synthase and a reduction in ergosterol content

Version: 3 Date: 22 April 2013

Reviewer: Long N Nguyen

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The authors studied the antifungal actions of natural flavonoids such as quercetin, trans-chalcone to growth of the fungus Trichophyton rubrum by MIC and correlated the antifungal activity of these compounds to gene expression of few lipid metabolism genes in the fungus.

As requested previously by this reviewer that authors should consider to test whether palmitate or oleate could reverse the effects of these compounds on the growth of Trichophyton rubrum. This is a very simple assay, but informative to test whether inhibitory effects of these compounds are on Fas1, Fas2 activity.

Although, authors provided the inhibition of FAS activity in extracted proteins, this assay is insufficient to show that these compounds inhibit FAS activity. Furthermore, authors has used cerulenin for gene expression study, why it was not used as a positive control for these assays.

additionally, the MS contains many typos

Level of interest: An article of limited interest

Quality of written English: Not suitable for publication unless extensively edited

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