Reviewer's report

**Title:** Citrus aurantium L. essential oil exhibits anxiolytic-like activity mediated by 5-HT1A-receptors and reduces cholesterol after repeated oral treatment

**Version:** 1  **Date:** 29 October 2012

**Reviewer:** Andrzej Pilc

**Reviewer's report:**

Report on the manuscript entitled "Citrus aurantium L. essential oil exhibits anxiolytic-like activity mediated by 5-HT1A-receptors and reduces cholesterol after repeated oral treatment" by Costa et al.,

What requires major compulsory revision:

1. A major problem I have with the manuscript is that no clear dose-dependency of the anxiolytic action of C. aurantium essential oil can be seen. The dose of 5 mg/kg shows a significant effect similar in magnitude to that after a dose of 50 mg/kg, which however is not significant. On the other hand the dose of 10 exerts effect identical as the dose 1 mg/kg showing no efficacy. Perhaps doses of 2.5 and 7.5 mg/kg should be also investigated.

2. Concerning the FST- it is necessary to provide the locomotor activity data as an obvious control.

3. References must be provided.

Essential minor revision:

1. The variability of some of the data shown in table 5 (e.g. the level of Dopamine is 722 +/- 744, and 1219 +/- 1199) is tremendous, is the assay working properly?

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.