Reviewer's report

Title: Distinct signal transduction signatures in leukocyte subsets stimulated with the khat-derived natural amphetamine cathinone and its derivatives cathine and norephedrine

Version: 2 Date: 19 April 2013

Reviewer: Valentina Galbiati

Reviewer's report:

Minor essential revision

DISCUSSION

You write "Cathinone and its natural derivates generally suppressed basal phosphorylation of the examined signal transducers and stress sensors, while khat-extract induced protein post-translational modification" and after "Further, even if not statistical significant, cathine and cathinone indicated elevated p-CREB levels in all leukocyte subsets, whereas nor ephedrine reduced basal phosphorylation of CREB". Have you got some more explanation for the CREB's phosphorylation?

As you certainly know, the herbal drug kath contains other compounds like Meruchatine, a phenylalkylamine (brenneisen et al 1984), and also catheduline alkaloids (Crombie, 1980). Have you considered these others compounds and their pharmacological/biological actions? And there are other natural plants or phytocomplexes with the same characteristics of Catha edulis?

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

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