Reviewer's report

Title: Protective effects of Egyptian cloudy apple juice and apple peel extract on lipid peroxidation, antioxidant enzymes and inflammatory status in diabetic rat pancreas

Version: 2 Date: 17 July 2015

Reviewer: Malgorzata Kujawska

Reviewer’s report:

The presented paper is an interesting biological study comparing the potentially anti-diabetic effects of two types of apple preparations with different compositions of polyphenolic compounds. However, I have the following comments.

Major Revisions

1. In Table 3 there is no value for the blood glucose level in normal controls 3 days after the STZ administration. There are no superscripts of a statistical significance of changes for this parameter between experimental and control groups 3 days after the STZ treatment, while in the Results section marked changes are reported. Moreover, on what basis did the Authors came to the conclusion described with the following sentence “After STZ injection, a significant increase in blood glucose was observed in diabetic control rats as compared with normal control rats (P<0.05)”, if the value in the normal control group is unknown?

2. Page 16 lines 343-346. There is information that CAJ and APE could effect on enzymes engaged in carbohydrate’s metabolism. Did the Authors estimate activity or expression of any of these enzymes?

Minor Revisions:

1. In the description of the animal experiment there is wrong name of rat stock - Waster. Probably Wistar rats were used in the experiment.

2. The description of treatments of experimental groups is unclear. There are no details on the time of the beginning of administration of the tested preparations and streptozotocin (STZ).

3. The use of superscripts (a,b) in tables and figures is unclear. It would apply different superscripts for marking statistically significant differences observed versus normal control and diabetic control groups.

4. Page 15 line 333. Epicatechins, catechins, and procyanidins are not “several classes of polyphenol antioxidants “they belong to the flavonoid class.

5. Page 17 lines 366-367. It is untrue to say that “LPO is an index of MDA production” because MDA serves as an index of lipid peroxidation (LPO).

Level of interest: An article of importance in its field
Quality of written English: Needs some language corrections before being published

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.