Reviewer's report

Title: Effects of Acai (Euterpe oleracea Mart.) berry preparation on metabolic parameters in a healthy overweight population: A pilot study

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Reviewer: Diane L McKay

Reviewer's report:

This study describes a 30-day uncontrolled pilot study of a proprietary preparation of acai pulp on selected risk factors for metabolic syndrome in 10 apparently healthy overweight adults. The manuscript does have some potential merit, particularly with regard to the post-prandial response following a standardized meal administered at baseline and after 30 days of acai consumption. However, the post-prandial glucose data is neither expressed nor analyzed correctly. Furthermore, several remarks in the results/discussion section are overstated or lack proper context.

Major Compulsory Revision:
The expression of the post prandial glucose data in Figure 1, and throughout the manuscript is incorrect. Since data was collected over several time points, it should be expressed as area under the curve (AUC). To determine if the peak glucose concentration, or time to peak, was different after acai consumption, the data should first be expressed as % of baseline glucose levels (adjusted) rather than unadjusted individual points. Also, the statistical comparison between post prandial glucose responses at 0 vs. 30 d should use the AUC and adjusted data. It is essential that the presentation of this outcome parameter be revised. Only then can you determine whether the acai had a potential effect on the post prandial glucose response.

If collected samples are still available, it would also be of great interest to see if there were any differences in the post prandial insulin response (again expressed as AUC or adjusted for baseline levels) between the 2 standardized meals. Although this additional analysis is optional, it is strongly encouraged to enhance the quality and merit of this manuscript.

Although the collection of dietary data is mentioned, it does not appear to have been accounted for in the results. How do we know that the effects shown are not due to changes in dietary intake? If subjects' dietary intake was not assessed at both the beginning and end of the intervention, then these changes could have been due to their background diet, and not to the acai product.

The methods section should be revised to include adequate detail about each method, and pertinent references, so that the experiment can be reproduced by others.
References to other studies in the introduction and elsewhere must clearly state whether the significant changes mentioned are compared to baseline values, or a placebo group.

Authors should be clear in all statements that this is an uncontrolled pilot study, and that there are clear limitations to the interpretation of these findings.

Although the changes observed over 30 d are statistically significant, it is unclear whether they are clinically important. Lowering the values from the upper end of the normal range to the mid range is not meaningful.

Table 2 is unnecessary, and Figure 1 should be revised.

Overall, the authors have not done an adequate job of justifying the conduct of this study or placing the results in the context of other work in this area of research, i.e., dietary bioactives.

**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