Reviewer's report

Title: Improved Weight Management Using Genetic Information to Personalize a Calorie Controlled Diet

Version: Date: 18 June 2007

Reviewer: Maria C. Ochoa

Reviewer's report:

General

This study established differences in weight lost between two groups. Subjects of the first group received a weight management treatment including diet and physical activity guidelines. Whereas, subjects of the second group received the same treatment and personalized advices based on the results of a nutrigenetic test. They found that subjects of the second group had a better longer-term BMI reduction and a higher fasting glucose levels decrease.

This issue is original and very interesting, and the study is well designed with a year of follow up, however some aspects of the manuscript must be improved before the publication.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1-Since there are hundreds of genetics markers involved in weight regulation that could be selected and the function of some of the selected SNP is not fully known, the authors should explain why these specific genes and SNPs have been selected and how they designed the specific recommendations for each mutated SNP.

2-The use of a one-way analysis of variance test must be justified. Had all the variables a normal distribution? Why the authors did not use a t-student test?

3-The deviation from the Hardy-Weinberg prediction of the PPAR SNP must be discussed.

4-In the non-tested group, there were 16 pre-diabetic subjects, whereas in the nutrigenetics group there were 30. This difference must be discussed, since the lack of statistically significant differences in the non-tested group could be due to the low number of subjects.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1-There are some misprint along the manuscript (i.e.: the lack of full stop in the first paragraph of the abstract and the presence of two of them in the second paragraph).

2-Units of BMI (all the manuscript) and insulin levels (table 4) must be indicated.

3-The name of the used enzymatic kits must be completed.

4-Figure 1 is not cited in the text.

Discretionary Revisions (which the author can choose to ignore)

General

1-The nutrigenetics test group could be called “NT group” along the manuscript.
2-The time periods must be always in the same unit (days or months)

3-“Blood glucose levels” can be renamed as “blood fasting glucose levels”

4-The “y” axis of figure 1 could represent logarithmic units, that are more suitable for OR.
What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its field

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

Statistical review: Yes, and I have assessed the statistics in my report.