Reviewer’s report

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

Version: 1 Date: 20 August 2007

Reviewer: Raymond Rodriguez

Reviewer’s report:

General:

1. The authors are addressing an important question regarding the efficacy of nutrigenomic testing promote weight management and blood glucose levels. High BMI and blood sugar are indicators of serious chronic diseases like cardiovascular disease and type 2 diabetes. Arkadianos et al, describe a weight loss and wellness study based on case histories involving patients attending his clinic in Athens Greece. Given the interest in reducing obesity and risk of type 2 diabetes, I believe the paper warrants publication in Nutrition Journal.

2. The methods used by the authors are appropriate and well described, and are sufficient details provided to replicate the work.

3. The data reported by the authors are sound. The case histories involved 50 “nutrigenetic tested” patients (22 female, 28 male) were compared to those of 43 patients in the non-tested group (18 female and 25 male). Individuals in the nutrigenetic test group were more likely to have maintained some weight loss (19/26; 73%) than those in the comparison group (7/22; 32%) resulting in an age and gender adjusted odds ratio of 5.74 (95% CI 1.74-22.52 p<0.005). While it is difficult to evaluate the precise role nutrigenomic testing played in the weight and blood glucose reduction, many for the 24 SNPs used in the test are directly or indirectly related to these co-morbidities of obesity.

Regarding whether the study was well controlled, the authors address the major weakness in the study with the following statement, “We note some limitations to the current study. First, our data could be explained by a difference in compliance and as there is no placebo arm to this study it is not possible to evaluate any physiological improvements due to the specific nutritional advice targeted to the patient’s genotype.” After researching the AMA’s position on publishing placebo affects (see Miller, F.G., Rosenstein, D.L., Evans, and DeRenzo, E.G. Professional Integrity in Clinical Research. 1998. JAMA 280:1449-54), I determined the paper warranted publication because of the value of reporting placebo result (if that was the affect of the nutrigenomic testing).

4. Yes, the manuscript adheres to the relevant standards for reporting and data deposition.

5. Yes, the discussion and conclusions are well balanced and adequately
supported by the data.
6. Yes, the title and abstract accurately convey what the investigators have found.
7. Yes, the writing is acceptable.

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

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

Discretionary Revisions (which the author can choose to ignore)

What next?: Accept without revision

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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