Reviewer's report

Title: Improvements in vascular health by a low-fat diet, but not a high-fat diet, are mediated by changes in adipocyte biology

Version: 1 Date: 14 December 2010

Reviewer: Yanwen Wang

Reviewer's report:

Dr. Varady et al. report in this paper that weight loss resulting from low-fat diet and food restriction is an effective approach to improve FMD, which is highly related to CHD. With the prevalence of obesity, cardiovascular dysfunction has become increasingly critical. Any treatment that can improve FMD and thus CHD is beneficial to patients or those who have high risk for developing these disorders. Therefore, this manuscript has provided important information on weight control and cardiovascular health. Data in this manuscript are also helpful to clarify the contradictory effects of low fat diet versus high-fat diet combined with food restriction on weight loss and associated benefits, such as improvements on FMD and CHD. The manuscript is well written. The title and abstract conveys the findings the authors have observed. The methods are described with enough information. The results are precisely presented and discussion is appropriate.

Comments:
1. Diet composition, energy to protein ratio, total cholesterol concentration in diet or its daily intake should be provided.

2. The experiment was carried out to compare the treatment effect with its corresponding baseline. Please explain if the effect is solely due to the treatment when no placebo is included.

3. Please justify the reason for choosing time within subjects as a factor, which may make experimental error smaller without a proper rationale.

4. Please also provide the limitation of this study and suggested improvements for future experimental design.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests