Reviewer's report

Title: Brachial Artery Flow-mediated Dilation Following Exercise with Augmented Oscillatory and Retrograde Shear Rate

Version: 2 Date: 30 July 2012

Reviewer: Sabrina Molinaro

Reviewer's report:

Title : Brachial Artery Flow-mediated Dilation Following Exercise with Augmented Oscillatory and Retrograde Shear Rate
Authors: Blair D Johnson, Kieren J Mather, Sean C Newcomer, Timothy D Mickleborough and Janet P Wallace

Reviewer's report: Statistical Reviewer:
minor essential revisions
The authors structured the paper speaking of the design and rationale of their study but they need to provide extensive revisions to address many fundamental aspects of their paper, as described below.

Patient population
1) Authors should provide a better explanation of the method used for subject randomization.
2) Authors should provide a description of the characteristics of the two arms.

Methods
Should the Authors provide more detailed physical activity description for the subjects (i.e. endurance, strength..)

Statistical analysis
3) This sentence seems not showed by the analysis results “When a significant interaction or main effect was found, the Fisher-Hayter post hoc procedure was used to find where pairwise differences existed and to correct for multiple comparisons. Partial eta squared (#2) was determined for ANOVA interactions and main effects as an estimate of effect size.” Could please Authors add more detailed information about it?
4) Should the Author better explain the sentence “We made the assumption that oxidative stress was responsible for 70% of the pilot data effect size (f=1.2) with a power of 0.80 and alpha level of 0.05.” Especially if the effect is calculated on the first mean (3.93) or the differences of the mean.

Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Acceptable

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

Declaration of competing interests:

I declare that I have no competing interests' below. If your reply is yes to any, please give details below.