Reviewer’s report

Title: Can supplementation with vitamin C and E alter physiological adaptations to strength training? Design and rationale.

Version: 3 Date: 22 April 2014

Reviewer: Athanasios Jamurtas

Reviewer’s report:

An interesting study with several parameters to be assessed. There is a sound introduction and hypothesis and the methods section is pretty easy to follow. However, there are several aspects that need to be addressed so the study is easier to be followed by the reader.

Since women were included in the study and a few things need to be clarified. What time of their menstrual cycle was data collected? Did any woman take contraceptives?

Why were there different apparatus (DXA) to assess body composition in the two groups?

What is the value of adding Bio-impedance to assess body composition since DXA was used?

There are several tests that were conducted either on young or old individuals alone. An explanation needs to be given behind the reason of this selective approach.

Line 376: It is not clear how many muscle biopsies in total were performed on young individuals.

Ln 397 Why is glutathione measured in plasma and not in red blood lysate?

Ln 401: At what time point of the whole experiment the procedure to assess protein synthesis is taking place?

Ln 401: Indicate how much and how many blood samples were taken during that procedure.

Ln 477-479: Please re-phrase.

Ln 505-506: Please re-phrase.

Ln 559 Replace “antioxidants” with “antioxidant”.

Level of interest: An article of outstanding merit and interest in its field

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