Reviewer's report

Title: Cardioprotection afforded by exercise training prior to myocardial infarction is associated with autonomic function improvement

Version: 2 Date: 4 May 2014

Reviewer: antonio crisafulli

Reviewer's report:

Title of the paper: "Cardioprotection afforded by exercise training prior to myocardial infarction .... " by Rodrigues F. et al.

This study discusses the role and effects of exercise training in the autonomic modulation after myocardial infarction. Authors found that ET can successfully decrease the autonomic impairment which is often observed after MI.

General comments: The paper is in general well written and the message is easily gleaned. Results appear to be supported by an appropriate methodological approach. My main concern is about statistics, which somehow flaws (see my specific comments).

Moreover, the paper can be improved by adding some recent reviews dealing with the effect of exercise training and hemodynamics in chronic heart failure.

Moreover, the fact that the present study is on rats and that findings can not be applied straightforwardly on humans should be clearly stated.

Specific points:

Introduction, page 4, lines 6-10: please refer to the recent review by Piepoli et al. (Int. J. Cardiol. 2008) which is more recent than papers you cite;

page 4, lines 13-15: similar as the previous point: please refer to the very recent review by Piepoli and Crisafulli (Exp. Physiol. 2014) on the effects of exercise training in CHF hemodynamics;

Statistical analyses, page 9: please specify which main factors have been used in the two way ANOVA and spell out ANOVA (analysis of variance).

Why did you use repeated measure ANOVA to find out differences between data measured over time? From figures it seems that you have also assessed differences between groups. Thus, this approach is misleading. Please explain.

You sowed results of correlation, but nowhere in the statistical analysis paragraph the statistic approach has been specified.

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.

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