Reviewer’s report

Title: Noninvasive monitoring of cardiac function in a chronic ischemic heart failure model in the rat: Assessment with tissue Doppler and non-Doppler 2D strain echocardiography

Version: 1 Date: 27 December 2010

Reviewer: Rosa Sicari

Reviewer’s report:

The present manuscript addresses the feasibility of new echo technologies such as strain and strain rate in the experimental setting. The premises are interesting but the aims of the study and its design are not clear.

1. Is this a feasibility study? If it is so authors should provide data on the number of successful analyses they performed.
2. The background of the manuscript is not clear: aims and study design should be given.
3. In line with previous comment, strain and strain rate are poorly accurate in the presence of high heart rates as it happens in rats. Please address.
4. What is the added value of these technologies when compared to the more established analysis of EF?
5. When using box and whiskers 95% CI should be given.
6. There are several experimental and clinical studies demonstrating that the impairment of regional function is not only strictly in the infarct related artery territory. Please address.
7. In the background of the manuscript authors use the phrase “contemporary echocardiography”: what is the meaning?
8. Please tone down the expression “desperately”, in the background section of the manuscript.
9. There are a few typos throughout the manuscript. Please proofread.

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

Quality of written English: Needs some language corrections before being published

Declaration of competing interests:

'I declare that I have no competing interests'