Reviewer's report

Title: Transcriptional profiling of left ventricle and peripheral blood mononuclear cells in a rat model of postinfarction heart failure

Version: 1 Date: 6 September 2013

Reviewer: Peter Kamp Busk

Reviewer's report:

Thank you for the opportunity to read this interesting manuscript before it is published. This report represents the result of a lot of hard and thorough work.

• Major Compulsory Revisions
1. A proper justification like a geNorm analysis or similar, comparing the reference genes to other putative reference genes, is necessary to explain how the two reference genes (gapdh and hprt1) were chosen.
2. It appears from the “Materials and Methods” that the qPCR was performed by triplicate PCR from a single RT reaction. This method does not account for differences due to variations in the RT reaction which are important for the deviation of the qPCR results.

In view of the many small fold changes reported it is necessary to do the qPCR at least twice on two different RT reactions.

3. The authors should state how their RT-qPCR procedure adhere to the MIQE guidelines.
4. In the view of the missing clarity of the RT-qPCR procedure it is difficult to rely on the results of the RT-qPCR validation. P-values are reported, but they are calculated from triplicate PCR reactions of a single RT reaction and does therefore not account for the technical variation of the complete RT-qPCR procedure.

Even when RT-qPCR experiments are performed very stringently it is difficult ro rely on data showing a less than 2-fold change. The authors should discuss this and divide their discussion of the interesting candidates into a discussion of the candidates with more than 2-fold change and candidates with less than 2-fold change.

• Minor Essential Revisions
On Page 5 the word hybridization is misspelled twice.

The last sentence of the conclusion “and, in a further perspective, also novel drug targets for this widespread devastating or even fatal condition.” seems to speculative and has no justification in the manuscript. It should be deleted.

• Discretionary Revisions
The authors should consider including a PCA plot of the gene expression data
from PBMCs.

**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.