Reviewer's report

Title: PEP-1-SOD1 fusion proteins block cardiac fibroblast activation and angiotensin II-induced collagen production

Version: 2
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Reviewer: Paul Fedak

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MAJOR COMPULSORY:

It is generally accepted that primary culture fibroblasts grown on low-compliance substrates (i.e. culture flasks) exhibit characteristics of myofibroblasts in vitro without concurrent chemical stimulation. This transition happens soon after initial cell isolation and after a passage of cells. It would therefore be more accurate to say that the cells the authors are working with are rat cardiac MYOfibroblasts. The data in Figure 4A shows that the cells express alpha-SMA at baseline. This indicates that the cells are myofibroblasts and not fibroblasts. I would recommend that the cells her referred to as myofibroblasts though out the paper. This doesn't change the impact of the paper or the interpretation of the results. The data appears to show that myofibroblast activity is altered by the treatment as opposed to data clearly proving that the phenotype of the cells is being altered.

The issue of cell death needs to be addressed. The treatment may induce cell injury or death and this could explain the data. How can the authors be certain that cell health or viability is not occurring in after treatment?

MINOR ESSENTIAL

There are spelling and grammar errors though out the text that should be corrected. Examples:

- Line 341, change “is” to “are”
- Line 369, change “show” to “shows”

DISCRETIONARY

The investigators serum-starved the cells prior to SOD1/PEP-1-SOD1 treatment but replaced the serum prior to Ang-II treatment. The rationale for this is unclear and could be better explained in the manuscript for clarity.

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.

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.