TEXAS HEART® INSTITUTE

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June 25, 2018

Phillip Steindel, Ph.D.
Review Editor
JoVE

Ref.: JoVE58123 Decellularization of Whole Human Heart inside a Pressurized Pouch in an Inverted Orientation

Dear Dr. Steindel:

Thank you for the editorial feedback. We have edited the manuscript based on the feedback.

Specific responses to the editorial comments are listed below:

Editorial comments:

1. Unfortunately, there are a few sections of the manuscript that show significant overlap with previously published work. Though there may be a limited number of ways to describe a technique, please use original language throughout the manuscript. Please see the attached iThenticate report, in particular lines: 212-217, 222-224, 231-235.

Response: *We have revised the manuscript to remove overlap with our previously published work. Many of the overlap, however, are names and concentrations of chemicals, solutions or sequence of steps that cannot be altered. Nevertheless, we have restructured these sentences to minimize overlap with our previous publications.*

2. Protocol: With formatting according to JoVE standards (spacing between all steps/substeps, all text aligned to the left margin; see attached revision), the protocol exceeds the maximum length for filming. Please highlight the portion of the protocol you wish to have filmed.

Response: *We have highlighted part (sections 1.4 to 2.3) of the protocol that we want to be filmed.*

3. Protocol: Please ensure that every step/substep has at least one action written in the imperative, and that each one contains no more than 2-3 actions or 4 sentences.

Response: *We have revised the protocol so that all steps/substeps now contain at least one action written in the imperative, and 2-3 actions or 4 sentences.*

4. Protocol 3: Can you comment on when exactly you might do these evaluations? For every heart?

Response: *We have added the clarification that the evaluations are performed in representative hearts.*

5. Table 1: Please remove from the manuscript and upload as a .xls/.xlsx file.

Response: *We have made Table 1 a separate excel file.*

6. Figure 6: '@ SDS 4d', not '@SDS d'.

Response: *We have corrected this error in Fig. 6.*

7. Figure 10: What should a cell look like here and what types of cells are shown? Also, it should be '50 μm' on the scale bar, not '50um'.

Response: *We have added arrows to indicate cells in the cadaveric tissue in Figure 10. We have also added that these cells are either cardiomyocytes or cardiac fibroblasts in the figure legend. We have changed the scale bar to be '50 μm'.*

8. Per your reply to Reviewer 3, could you comment a bit more in the manuscript about recellularization/the immune response as well as the residual coloring in Figure 6?

Response: *We have added a discussion on the recellularization/ immune response to the discussion section. This reads as: "A main goal for decellularized tissues is to be able to repopulate them with cells and achieve high cell attachment, proliferation, maturation and functionality. Our decellularized tissues have been successfully recellularized for various applications, where the tissues were successfully recellularized and achieved lower thrombogenicity."*

We now discuss the residual coloring in Figure 6 legend. This reads as: "The coloring in the human hearts is caused by residual lipofucin deposition. The coloring normally presents in inner ventricular surface or the boundary between epicardium and myocardium. "

Sincerely,

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