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30 July 30, 2018

Dr. Alisha DSouza  
Senior Review Editor  
JoVE  
1 Alewife Center, Suite 200  
Cambridge, MA 02140

JoVE58330  
“Laminectomy and spinal cord window implantation in the mouse”

Dear Dr. DSouza,

I am submitting the revised manuscript JoVE58330 “Laminectomy and spinal cord window implantation in the mouse” by Pietruczyk et al., for consideration in JoVE. We thank you and the reviewers for providing opportunities to improve our manuscript. The revised manuscript contains significant changes that address reviewers’ concerns. I briefly outline below some of the major changes we have implemented and provide a detailed response in the Response to Reviewers document.

We have substantially revised each section of the manuscript to address the concerns raised by our reviewers. We have revised the title, abstract, introduction, methods, and discussion to focus on the advantages and disadvantages of our protocol relative to other laminectomy and window implantation protocols, and have deemphasized the application to study of the blood-brain barrier. We have greatly expanded the details of the protocol section to enhance clarity. We added several paragraphs to the discussion highlighting advantages and limitations of our protocol relative to other protocols in the literature. We added two new figures, one depicting the dimensions and construction of the backplate (Figure 1), and one depicting anatomic representation of the backplate implantation site (Figure 3). We have included supplementary files users can download to customize and to print backplates. We substantially revised figure 1 (now figure 2) to better depict the tools and configuration of the surgical setup. We replaced the previous representative results figure with a new figure (Figure 4), that incorporates a series of single optical sections as well as a Z-projection, designed to convey more information about the imaging field with respect to tissue surface landmarks and the depth of imaging that can be achieved with the currently described laminectomy and spinal cord window preparation. In light

of the extensive revisions, we have not used the “track changes” feature on the revised manuscript.

We provide here a response to the Editorial Comments. We also provide a detailed point-by-point response to the reviewers’ concerns regarding the original manuscript in the Reviewers Response document. We hope that the revised manuscript addresses the majority of the reviewers’ concerns and would be of interest for publication in *JoVE*. I look forward to hearing from you in the near future.

### **Editorial comments:**

Changes to be made by the Author(s):

1. Please take this opportunity to thoroughly proofread the manuscript to ensure that there are no spelling or grammar issues. The JoVE editor will not copy-edit your manuscript and any errors in the submitted revision may be present in the published version.

2. Please provide an email address for each author.  
Email addresses have been provided for each author.

3. Please use SI abbreviations for all units: L, mL,  $\mu$ L, h, min, s, etc.  
We corrected the use of Mg/ml to mg/mL on page 2 line 2 and minutes to min on page 2 line 8-9.

4. Please include a space between all numbers and their corresponding units: 15 mM, 37 °C, 60 s; etc.  
We have carefully proofread and made corrections to the formatting as noted, including on page 1 line 42-44.

5. Please use subscripts in chemical formulae to indicate the number of atoms, e.g., H<sub>2</sub>O.  
We added subscripts in chemical formulae.

6. Please revise the protocol text to avoid the use of any personal pronouns (e.g., "we", "you", "our" etc.).  
We have made corrections to avoid the use of personal pronouns, including on page 1 line 22-29, page 4 line 30-31.

7. Please remove all commercial language from your manuscript and use generic terms instead. All commercial products should be sufficiently referenced in the Table of Materials and Reagents.  
For example: Vetbond, Kent Scientific SomnoSuite, Leica M205, Leica MC170, etc.  
We have removed all commercial language from manuscript as noted.

8. 1.1: What is used to warm aCSF? Please specify.  
We corrected text on page 1 line 31 to specify a water bath is used to warm aCSF.

9. 2.3: Please specify where ophthalmic ointment is applied.

We corrected text on page 3 line 20 to specify where to apply ophthalmic ointment (to the eye).

10. 4.7: Please add more details to this step. Alternatively, add references to published material specifying how to perform the protocol action.

We have added a section titled “Imaging Preparation” in which we add more details.

11. References: Please do not abbreviate journal titles.

We have utilized the JoVE Style Output in Endnote, downloaded and updated July 31, 2017. However, we find that the output continues to abbreviate the journal titles. Per our previous correspondence, we are grateful for your offer to permit us to submit the manuscript with the references in the abbreviated journal title format.

With sincere regards,

A handwritten signature in black ink, reading "Sarah E. Lutz". The signature is fluid and cursive, with the first name "Sarah" being more prominent than the last name "Lutz".

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