



*The University of Oklahoma*

SCHOOL OF AEROSPACE & MECHANICAL ENGINEERING

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November 26, 2018

Dr. Nandita Singh  
Senior Science Editor

Dr. Alisha DSouza  
Senior Review Editor

Journal of Visualized Experiments  
1 Alewife Center Suite 200  
Cambridge, MA 02140, USA

**RE: Cover Letter for the Revised Manuscript (JoVE59170) Resubmitted to the Journal of Visualized Experiments (JoVE)**

Dear Dr. Singh and Dr. DSouza,

Enclosed please find our revised manuscript for resubmission to the Journal of Visualized Experiments (JoVE), titled "*Biaxial Mechanical Characterizations of Atrioventricular Heart Valves*," authored by Colton Ross, Devin Laurence, Dr. Yi Wu, and myself.

We are greatly grateful for the constructive and thoughtful comments received from the review, and we have taken these comments into consideration in the revision and improvement of our manuscript. Changes in the manuscript, along with our responses to both the editorial comments and the reviewers' comments, are provided in the "Rebuttal Document" as part of our resubmission.

In addition, all authors were fully involved in the study and preparation of the manuscript and that the material within has not been and will not be submitted for publication elsewhere. The novelty and research highlight are briefly summarized below:

- A biaxial mechanical testing procedure has been, for the first time, documented for mechanical characterization of atrioventricular heart valve leaflets;
- Such a novel, unified tissue mechanical characterization experiment consists of (i) a force-controlled biaxial testing protocol, (ii) a displacement-controlled biaxial testing protocol, and (iii) a biaxial stress-relaxation testing protocol.

The experimental protocol presented in this revised manuscript is applicable not only to heart valve leaflet tissues but also to other soft biological tissues, or polymers/rubber-type materials. The provided scheme would provide for full characterization of any such materials compatible with a biaxial testing device.

We believe this paper will be of great interest to the audience of the JoVE. We hope that you will see the work in a similar light.

Thanks for your time and consideration.

Sincerely,

A handwritten signature in black ink that reads "Chung-Hao Lee". The script is cursive and fluid, with the first name "Chung-Hao" and the last name "Lee" clearly distinguishable.

Chung-Hao Lee, Ph.D.  
Assistant Professor  
School of Aerospace and Mechanical Engineering  
Faculty Member  
Institute for Biomedical Engineering, Science and Technology  
The University of Oklahoma