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February 1, 2021

Dr. Farshid Guilak

Editor-in-Chief, Journal of Biomechanics

[em@editorialmanager.com](mailto:em@editorialmanager.com)

Dear Dr., Guilak,

I am enclosing a submission of an original research article to Journal of Biomechanics titled *“The influence of bicycle lean on maximal power output during sprint cycling”*. The manuscript is 3275 words long and includes three figures.

I would like to sincerely thank the International Society of Biomechanics for supporting this research through a Student International Travel Grant.

In this study we investigated the question of whether bicycle lean affects maximal power output during sprint cycling by creating a novel cycling ergometer that can lean from side-to-side but can also be locked to prevent lean. Our findings show that leaning the bicycle does not enhance maximal power output compared to a traditional stationary ergometer but trying to minimize bicycle lean impairs maximal power output by 5%. These findings have obvious applications to the field of cycling and can be translated to broader questions regarding the effects of instability on human force and power production.

The study was conducted as per the University of Colorado Institutional Review Board. This manuscript has not been published before and is not under consideration for publication anywhere else. My coauthor and I have no conflicts of interest to disclose.

I will be serving as the corresponding author for this manuscript. My coauthor has agreed to submission of the manuscript in this form. I have assumed responsibility for keeping my coauthor informed of our progress throughout the editorial review process, the content of the reviews, and any revisions made to the manuscript.

Sincerely,

Ross Wilkinson, Ph.D.

Post-doctoral Researcher

Department of Integrative Physiology

University of Colorado Boulder

On behalf of co-author Dr Rodger Kram