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Jos de Koning
Editor
International Journal of Sports Physiology and Performance (IJSPP)

Dear Editor-in-Chief,

Please find enclosed the manuscript of a paper entitled "**Predicting eggbeater kick performances from hip joint testing in artistic swimming**" by Romain Martinez (corresponding author), Élodie Monga-Dubreuil, Najoua Assila, Gauthier Desmytterre and Mickaël Begon that we are submitting to be considered for publication in International Journal of Sports Physiology and Performance, as an **Original Investigation**.

In this manuscript, we modelled the performance of key skills in artistic swimming as a function of the hip maximum isometric strength with a machine learning algorithm. Our model may accurately predict future performances as the generalization error is similar to the resolution of the FINA guiding scale for height–which is used during official competitions. The purpose of such a model is twofold. First, it can be used to predict future performance and is therefore useful in a selection setting. Second, the interpretation of this model can help to build personalized and potentially efficient conditioning programs. We believe this information to be relevant for the readers of the IJSPP as the results: (1) provide some of the important predictors of key technical skills in artistic swimming, (2) provide isometric hip strength normative data in elite artistic swimmers and (3) show that predictive modelling can be used to select athletes and to design personalized conditioning goals.

This work is not under consideration at another journal and the material will not be submitted for publication elsewhere while it is under consideration for publication in IJSPP. The manuscript has been read and approved by all the listed co-authors and meets the requirements of co-authorship as specified in the Authorship Guidelines. I had full access to all of the data in this study and take full responsibility for their integrity and analysis. I would like to give you the figures in vector format but I was not able to submit my figures in the PDF format, as stated in the author guidelines. I submitted the files as supplementary material. If this is not acceptable, I remain at your disposal to provide files in the vector format you require.

Sincerely,

Romain Martinez