Reviewer’s report

Title: Comparative transcriptome analysis of human skeletal muscle in response to cold acclimation and exercise training in human volunteers

Version: 0 Date: 15 Apr 2020

Reviewer: Jonathan Brown

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In this study Nascimento et al compare differential gene expression in skeletal muscle from two groups: 1) volunteers with T2D who are acclimated to cold exposure and 2) healthy volunteers exposed to a controlled/supervised exercise program. The goal of the study was to understand the relationship between metabolic adaptation to cold via effects in skeletal muscle and also perform a similarity analysis to the exercise training. I believe this study is well down. I also believe the appropriate caveats are mentioned in the discussion. As a result, the authors do not conclude more than the data permit. This work will be a nice resource for other groups to have gene expression datasets generated from the work. The observations also raise interesting hypotheses that can be tested in the future.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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