Review of: "The Ca2+-gated Cl- channel TMEM16A amplifies capillary pericyte contraction reducing cerebral blood flow after ischemia"

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Potential competing interests: The author(s) declared that no potential competing interests exist.

April 12, 2022

Qeios ID: YF2WP2

Ref: https://doi.org/10.1101/2022.02.03.479031

"The Ca2+-gated Cl- channel TMEM16A amplifies capillary pericyte contraction reducing cerebral blood flow after ischemia"

Authors: *Nils Korte1, Zeki Ilkan, Claire Pearson, Thomas Pfeiffer, Prabhav Singhal, Jason Rock, Huma Sethi, Dipender Gill, David Attwell & Paolo Tammaro.*

COMMENTS:

In this important paper, authors investigated the expression of the Ca^{2+}-gated anion channel TMEM16A in pericyte-mediated capillary constriction. The questions and aims proposed are very sound and diversity of approaches employed very valuable. However, I think there are few points that need to be clarified, in particular that regarded to e TMEM16A expression in human pericytes. In spite of this point and differences in Ani9 concentrations, I think the manuscript is publishable and gives very valuable novel data.

Major points

1- Experimental design: Please, justify the differences in the Ani9 concentrations employed to answer specific points: 2 µM in the evaluation of the effects on capillary diameter as well as in the experiments showing absence of Ani9 effects on pericyte concentration caused by increased $[K^+]o$; and 10 µM in CCAO experiments. What is the rationale for this change?

2- Fig. 1B: It results very hard to identify the co-localization of TMEM16A signal on the human pericyte. If other picture is not available, please, try a minor magnification or other strategies to better show what is proposed.

Minor points

1- Please, include the TMEM16A alternative name;

2- Homogenize the different spellings (i.e. depolarization or depolarization?, centers or centre?);

2- Homogenize Student t test in the correct way.