Reviewer’s report

Title: Identification of undecylenic acid as EAG channel inhibitor using surface plasmon resonance-based screen of KCNH channels

Version: 0 Date: 01 Jul 2019

Reviewer: Manish Tiwari

Reviewer's report:

1. This is an extremely well-written and a manuscript of significance in the area.

2. The authors have done a great job and for the first time identify a SPR-based chemical library screening method to identify small molecule binders for PAS domain of KCNH channels. This method has great significance and potential for future identification of target-specific small molecule binders.

3. The manuscript identified undecylenic acid as a PAS domain specific small molecule binder for KCNH channel. In addition, the authors show in their results structure-specific binding of undecylenic acid.

4. Furthermore, effects of the structure-specific binding has been demonstrated in the electrophysiology experiments using undecylenic acid.

5. Overall, a manuscript of significance in the field.
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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