Reviewer’s report

Title: NTP42, a novel antagonist of the thromboxane receptor, attenuates experimentally induced pulmonary arterial hypertension

Version: 0 Date: 17 Dec 2019

Reviewer: Vinicio de Jesus Perez

Reviewer's report:

1. Figure 1: I disagree with the authors' impression that TPa and b is observed in SM cells. Staining of TPa and TPb seems to be absent from muscle and localized only to endothelial cells and possibly inflammatory cells. Did the authors inspect plexogenic lesions for their staining patterns? Based on this pattern, I would have elected to use the SuHx rat model given that endothelial injury is the major trigger in this model. whereas MCT is more dependent on SMC driven vascular remodeling. A combination of both models is usually expected for preclinical studies of this type.

2. Figure 2: Did the authors attempt to do reversal studies? The studies presented are only designed to assess prevention of PH. This limits the impact of the data relative to the potential efficacy of the NTP42 for clinical PAH.

3. Why is the focus on mast cells alone? There is ample evidence that T cells and macrophages play a role in MCT induced PH. The authors should stain for these cells with validated markers (CD68, CD3, CD45 etc.). Also, they should use a validated marker of mast cell such as CD117 rather than toluidine.

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?
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I am able to assess the statistics

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