Reviewer's report

Title: Efficacy and Safety of Oral Sildenafil in Children with Down Syndrome and Pulmonary Hypertension

Version: 0 Date: 22 Jan 2017

Reviewer: Nassos Manginas

Reviewer's report:

In this post-hoc analysis from the STARTS-1 trial, the authors compared the effect of po sildenafil on PVRI, mPAP and CI, in children with PH, with and without DS.

They concluded that children with DS do not experience the benefit of sildenafil, compared to non-DS patients. They also offer useful pathophysiological explanations for the lack of this effect.

Major comments:

1. As stated in the results there are significant differences in baseline characteristics between the 2 groups. This should be added in the limitations of this analysis.

2. In reference to the above, it will be useful to the have in Tables 1 and 2, the p-values, if statistical differences have been identified.

Minor comments:

1. Is there dosing information available from the STARTS-1 study to better guide the reader, besides the sildenafil plasma concentrations (ex. mg/kg dose)?

2. In p.7, para 1, l. 5, "further analysis...", please clarify this sentence.

3. In p. 12, para 1, l. 1, what do you mean by "secondary PH in DS patients..."?
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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