Reviewer 2

Comments and Suggestions for Authors

The manuscript from Puls et al. presents the results of pre-treatment with Dexmedetomidine of juvenile rats under hyperoxia as a causative condition for damaged cerebral neurodevelopment.

Among their results it is worth to mention:

1. The authors have demonstrated that Dexmedetomidine was able to reduce the negative effects of hyperoxia on the number of Calbindin1 positive Purkinje cells and their dendrite's growth.
2. On the other hand, pre-treatment with Dexmedetomidine prevented de hypoxia reduction of granule cell precursors.
3. However, Dexmedetomidine has shown only a low effect on hyperoxia-injured cerebral development mediators, after analysis of the transcription expression of NeuN, NeuroD1 and Chd7.

In summary, the experiments carried out by Puls at al. provide consistent evidence that Dexmedetomidine has neuroprotectant activity in those physio-pathological situations of the neurodevelopment were hypoxia is a disrupting condition.

This manuscript deserves to be accepted for publication in ANTOXIDANTS.

Many thanks for this appreciative assessment.