



**SDI Review Form 1.6**

Journal Name:	<a href="#">Journal of Applied Life Sciences International</a>
Manuscript Number:	Ms_JALSI_50178
Title of the Manuscript:	Mild hyperoxia stimulation increases regional tissue oxygen pressure in rat hippocampus via oxygen radical
Type of the Article	Short Research Article

**General guideline for Peer Review process:**

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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**PART 1: Review Comments**

	<b>Reviewer's comment</b>	<b>Author's comment</b> (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<b>Compulsory</b> REVISION comments	<ol style="list-style-type: none"> <li><u>Section 3.3 of the Results.</u> Hyperoxia has been shown to affect microvascular pO<sub>2</sub> as well as haemoglobin affinity to oxygen. Therefore, additional experiments are required to demonstrate that the mentioned above parameters remain unchanged under mild hyperoxic conditions used in the study.</li> <li><u>Section 3.3 of the Results.</u> In the present study authors do not provide any experimental data, but state that "the main reason for the increase in Hip-pO<sub>2</sub> by mild hyperoxia is increase of hippocampal cerebral blood flow from increase of neuronal activity". However, Lowry et al. (ref. 21 in the manuscript) demonstrated that "Hyperoxia did not lead to significant changes in cerebral blood flow". Therefore, additional experiments on evaluation of hippocampal cerebral blood flow and detection of hippocampal activity must be performed.</li> <li><u>Section 3.4 of the Results.</u> Hypoxia has been shown to induce intracellular ROS production. Authors should discuss mechanisms of both hypoxia and hyperoxia-mediated induction of ROS.</li> <li><u>Section 3.4 of the Results.</u> There are several scavengers of mitochondrial superoxide available (MitoTEMPO, etc). Authors should perform additional experiments using one of superoxide scavengers to support their statement.</li> <li><u>Section 3.4 of the Results.</u> Inhibition of NADPH oxidase has been shown to boost ROS production. If authors claim that the effects of hyperoxia are superoxide-mediated, why apocynin doesn't affect Hip-pO<sub>2</sub>?</li> </ol>	
<b>Minor</b> REVISION comments	<ol style="list-style-type: none"> <li>The introduction should be overwritten to highlight the importance and relevance of the study.</li> <li>The authors should change the title of 3.3 Result section as this statement is not supported by data.</li> <li>In some sentences (neuron) "excitement" should be replaced with "stimulation" or "activation" to avoid unnecessary repeats.</li> </ol>	
<b>Optional/General</b> comments	The study could be of interest, although there are several concerns that need to be addressed before the manuscript can be accepted for publication.	

**PART 2:**

	<b>Reviewer's comment</b>	<b>Author's comment</b> (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<b>Are there ethical issues in this manuscript?</b>	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	



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