



SDI Review Form 1.6

Journal Name:	<a href="#">Annual Research &amp; Review in Biology</a>
Manuscript Number:	Ms_ARRB_53801
Title of the Manuscript:	Determination of Acetylcholinesterase and Butylcholinesterase inhibitory activities of <i>G. asiatica</i> and <i>G. tiliaefolia</i> (family Tiliaceae) leaves..
Type of the 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**

	Reviewer's comment	Author's comment (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	<ul style="list-style-type: none"> <li>Statistical analysis is missing. It is not clear whether there is a difference between the groups. It is not clear how many groups were formed during the experiments and how many chats were used in each group.</li> </ul>	
<b>Minor</b> REVISION comments	<ul style="list-style-type: none"> <li>"Determination of Acetylcholinesterase and Butylcholinesterase inhibitory activities of <i>G. asiatica</i> and <i>G. tiliaefolia</i> (family Tiliaceae) leaves." No need to dot at the end of the sentence.</li> <li>Make sure that these words are spelled correctly in the entire article: Acetylcholinesterase and Butyrylcholinesterase.</li> <li>"For the purpose of these experiments the extracts were subjected to an in-vivo study." Not in-vivo. It should be <i>ex-vivo</i></li> <li>"PEF" and "CLF" should be explained in abstract</li> <li>"The highest inhibition of bovine brain acetylcholinesterase and human blood butyrylcholinesterase were exhibited by PEF and CLF of <i>G.asiatica</i> with the IC<sub>50</sub> values were found to be 55.88µg/ml and 26.14 µg/ml respectively whereas the highest inhibition of bovine brain acetylcholinesterase and human blood butyrylcholinesterasewere exhibited by CLF of <i>G.tiliaefolia</i>." should be changed to "The highest inhibition of bovine brain acetylcholinesterase and human blood butyrylcholinesterase were exhibited by PEF and CLF of <i>G. asiatica</i> with the IC<sub>50</sub> values were found to be 55.88 µg/ml and 26.14 µg/ml respectively whereas the highest inhibition of bovine brain acetylcholinesterase and human blood butyrylcholinesterase were exhibited by CLF of <i>G. tiliaefolia</i>."</li> <li>Make sure that these words are spelled correctly in the entire article: <i>G. asiatica</i> and <i>G. tiliaefolia</i>.</li> <li>"The result of the present study of various fractions of this plants have considerable amount of anti-acetylcholinesterase and anti-butyrylcholinesterase activity which suggest its effectiveness against various neurodegenerative disorders." The sentence should be rewritten. There are grammatical errors.</li> <li>"Free radicals, Acetylcholinesterase, Butyrylcholinesterase, <i>G.asiatica</i>, <i>G.tiliaefolia</i>." should be changed to "Free radicals, Acetylcholinesterase, Butyrylcholinesterase, <i>G. asiatica</i>, <i>G. tiliaefolia</i>."</li> <li>"IC<sub>50</sub>: Concentration of an Inhibitor" should be changed to "IC<sub>50</sub>: The half maximal inhibitory concentration"</li> <li>"CEEGA: Crude ethanolic extract of <i>G. asitica</i>." Extract or fraction???</li> <li></li> <li>"AChE: Anti-acetylcholinesterase" should be changed to "AChE: Acetylcholinesterase"</li> <li>"BchE: Anti-butyrylcholinesterase" should be changed to "BchE: Butyrylcholinesterase"</li> <li>"The evaluation of medicinal plants, used traditionally in treating Alzheimer's disease (AD) is of growing interest. Alzheimer's disease (<del>AD</del>)"</li> <li>"Alzheimer's disease (AD) is a silent killer, one of the major leading causes of mortality after heart disease, cancer and stroke." is a magazine sentence. It should be rewritten with a more scientific sentence.</li> <li>"Therefore, inhibition of acetylcholinesterase (AChE), butyrylcholinesterase (BChE) enzyme and oxidation are the two promising strategies in the development of drug for neurological diseases like Alzheimer's and as well as in the treatment of Parkinson's disease, ataxia and dementia" should be changed to "Therefore, inhibition of acetylcholinesterase (AChE) and butyrylcholinesterase (BChE)</li> </ul>	



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	<p>enzymes are the two promising strategies in the development of drug for neurological diseases like Alzheimer's and as well as in the treatment of Parkinson's disease, ataxia and dementia"</p> <ul style="list-style-type: none"> <li>• "diarrhoea" should be changed to "diarrhea"</li> <li>• "antiplatelet" should be changed to "antiplatelet"</li> <li>• "Thus, our main intention of the present study is to investigate the neuroprotective effect of different extracts of two medicinal plants <i>i.e.</i> <i>G. asiatica</i> and <i>G. tiliaefolia</i> (Family-Tiliaceae) available in Bangladesh on animal model." should be changed to "Thus, in the present study different extracts of <i>G. asiatica</i> and <i>G. tiliaefolia</i> (Family-Tiliaceae) available in Bangladesh were evaluated for <i>ex-vivo</i> AChE and BChE inhibitory activities."</li> <li>• "After collection the plant was thoroughly washed with water and dried." should be changed to "After collection these plants were thoroughly washed with water and dried"</li> <li>• "For whole plant part of the dried and powdered materials (100 g for) were soaked in 500 ml of 90% ethanol for about 14 days at room temperature with occasional shaking." should be changed to "The whole plant parts were dried and powdered. 100 g powdered material was kept in 500 ml of 90% ethanol for about 14 days at room temperature with occasional shaking."</li> <li>• Figures 1 and 2 should be written just below the figures.</li> <li>• "Tris-Hcl buffer" should be changed to "Tris-HCl buffer"</li> <li>• "Acetyl cholinesterase inhibitory activity assay" should be changed to "<i>Ex-vivo</i> Acetylcholinesterase inhibitory activity assay"</li> <li>• The anti-acetylcholinesterase (AChE) assay</li> <li>• "colourimetric" should be changed to "colorimetric"</li> <li>• The <del>resulting</del> supernatant</li> <li>• "500µl" should be changed to "500 µl"</li> <li>• "Anti-butyrylcholinestrace activity assay" should be changed to "<i>Ex-vivo</i> Butyrylcholinesterase inhibitory activity assay"</li> <li>• "The acetylcholinesterase inhibitory activity of different extractives was determined by Ellman's method. This method estimates acetylcholinesterase (AChE) using acetylcholine iodide (substrate) and dithiobisnitro benzoic acid (DTNB)." should be changed to "The AChE inhibitory activity of different extractives was determined by Ellman's method. This method estimates AChE using acetylcholine iodide (substrate) and dithiobisnitro benzoic acid (DTNB)."</li> <li>• "The enzymatic activity was measured by the yellow color compound produced by thiocholine when it reacts with dithiobisnitro benzoate ion" should be changed to "The enzymatic activity was measured by the yellow color compound produced by thiocholine when it reacts with DTNB ion."</li> <li>• "The results for anticholinesterase activity of crude ethanolic extracts different fraction of <i>G. asiatica</i> are given in Table 1." should be changed to "The anti-AChE activity of crude ethanolic extracts different fraction of <i>G. asiatica</i> are given in Table 1."</li> <li>• The columns should be centered in the tables.</li> <li>• Figure 3 and figure 4 are not required when Table 1 is present.</li> <li>• Figure 5 and figure 6 are not required when Table 2 is present.</li> <li>• Figure 7 and figure 8 are not required when Table 3 is present.</li> <li>• Figure 9 and figure 10 are not required when Table 4 is present.</li> <li>• Statistical analysis should be performed and the differences between the groups should be shown in tables or figures.</li> <li>• "The AD has revealed the development of new therapeutic drugs for the AD is underway." This sentence should be rewritten.</li> <li>• "The history of drug discovery showed that plants are highly rich sources of bioactive compounds and lead to the development of drugs for the treatment of neurological diseases including Alzheimer's disease" should be changed to "The</li> </ul>	
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	<p>history of drug discovery showed that plants are highly rich sources of bioactive compounds and lead to the development of drugs for the treatment of neurological diseases including AD.”</p> <ul style="list-style-type: none"> <li>• “Inhibition of acetylcholinesterase enhances cholinergic transmission by reducing enzymatic degradation of acetylcholine is a promising strategy for the development of AD-drug.” should be changed to “Inhibition of AChE enhances cholinergic transmission by reducing enzymatic degradation of acetylcholine is a promising strategy for the development of AD-drug.”</li> <li>• “Acetylcholinesterase inhibitors are the only source of the compound that is currently approved for the treatment of Alzheimer’s disease.” should be changed to “AChE inhibitors are the only source of the compound that is currently approved for the treatment of AD”</li> <li>• “Among the fractions, the CLFGA and CLFGT had the highest % of inhibition on BChE at a concentration of 250 µg/ml. However, our results revealed significant anti-BChE effect of <i>G. asiatica</i> and <i>G. tiliaefolia</i>.” AChE inhibitory effects of these plants should also be mentioned.</li> <li>• If there are previous studies on these plants or extracts of these plants, they should be indicated, otherwise, the originality of this study should be emphasized.</li> <li>• “The protocol of the experiment was approved by the animal ethics committee of the Department of Pharmacy, Southeast University, Dhaka, Bangladesh.” protocol no should be added.</li> <li>• “The present study was undertaken to investigate the <i>in vivo</i> anticholinesterase and anti-BChE effects of <i>G. asiatica</i> and <i>G. tiliaefolia</i>. Inhibition of acetylcholinesterase, which enhances cholinergic transmission by reducing the enzymatic degradation of acetylcholine, is a promising strategy for the development of neurodegenerative disorders like Alzheimer’s diseases drug. <i>In vivo</i> effectiveness of <i>Grewia nervosa</i> and its components remains to be investigated. The results indicate that <i>G. asiatica</i> and <i>G. tiliaefolia</i>. may be of value for an effective treatment for Alzheimer’s disease.” should be changed to “The present study was undertaken to investigate the <i>ex vivo</i> anti-cholinesterase and anti-BChE effects of <i>G. asiatica</i> and <i>G. tiliaefolia</i>. Inhibition of AChE, which enhances cholinergic transmission by reducing the enzymatic degradation of acetylcholine, is a promising strategy for the development of neurodegenerative disorders like AD drug. <i>In vivo</i> effectiveness of <i>Grewia nervosa</i> and its components remains to be investigated. The results indicate that <i>G. asiatica</i> and <i>G. tiliaefolia</i>. may be of value for an effective treatment for AD.”</li> </ul>	
<p><b>Optional/General</b> comments</p>		

**PART 2:**

	Reviewer’s comment	Author’s comment (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)
<p><b>Are there ethical issues in this manuscript?</b></p>	<p><u>(If yes, Kindly please write down the ethical issues here in details)</u></p>	

**Reviewer Details:**

Name:	<b>Fatma Gonca Kocanci</b>
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