



SDI Review Form 1.6

Journal Name:	<u>International Journal of Biochemistry Research & Review</u>
Manuscript Number:	2014_IJBcRR_12893
Title of the Manuscript:	Determination of the effects of aqueous and ethanol extracts of <i>Vitex doniana</i> leaf on postprandial blood sugar concentration in Wister rats
Type of the Article	Herbal medicine

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)
<u>Compulsory</u> REVISION comments	Line 1,2 change title to "The effects of ethanolic and aqueous extracts of Vitex doniana leaf on postprandial blood sugar concentration in Wistar rats" Line 7 change ethanol to ethanolic Line8 change inhibitors to enzymes and change analysed to analyzed , change the experiment for the first experiment Line10 omit 18hrs line 11 change 2mg/kg to 2g/kg line11 you have to mention how you administered the sucrose and through which route line11 omit postprandial (0 hour is not post prandial) line11,12,13 should be written as follows" The blood samples were collected by(route of blood sampling) for determination of blood sugar . Sampling were done before administration (at 0 minute), and after administration (30, and 60 minutes) of sucrose. The experiment was repeated using aqueous extract. Line13-19 should be written as follows" In the second experiment, same procedure was repeated as in the first experiments but sucrose was substituted by glucose administration (2 g/kg)" Line19-25 should be written as follows" Results showed that both the 50 mg and 100 mg/kg ethanolic and aqueous extracts significantly decreased ($p<0.05$) the postprandial blood sugar concentration at 30 minutes compared to the control value. Conclusively, these results suggest that ethanolic and aqueous extracts of	These were all effected I must confess, this reviewer is explicit and excellent. please treat him with all respect to maintain and retain standard in ScienceDomain International Thank you.



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	the leaves of Vitex doniana have remarkable inhibitory effects on α-glucosidase enzymes with promising clinical relevance of reducing hyperglycemia via this mechanism. Line 26 key words has to be ordered alphabetically Line 33 omit type 1 diabetes Line 34 needs a reference Line 36 needs a reference Reference 2 is missing in the introduction Line 37 add “and hence the postprandial rise in plasma glucose is blunted in both normal and diabetic subjects [3]” Line 43 needs a reference Line 52 has to be written as follows” Hence, the present study aimed to determine its effects on postprandial blood glucose.” Comment for the introduction” despite the researches mentioned proved ant diabetic effect ,yet non mentioned this occurs through inhibition of α-Glucosidase enzymes Materials and methods has to be re written as follows Line 56 add “authenticated by Mr. A.O. Ozioko” Line 63 correct litres by liters Lines 65-66 has to be re written as follows” filtrate was concentrated using rotary evaporator under reduced pressure then allowed to dry at room temperature and stored in refrigerator prior to usage. Line 68 correct litres by liters Line 73 omit albino instead use” Wistar rat” Starting from line 77 the rest of materials and methods ha to be written as follows “Testing the effect of ethanolic/ aqueous extracts of the leaves after challenge with sucrose In this experiment, 25 Wistar rats were divided into 5 groups of 5 rats each. Treatments were carried out orally for one day. Overnight fasted animals (group 2-4) were orally administered different doses of the extract 10 minutes	
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	prior to the administration of sucrose at a dose of 2 g/kg(how). The blood sugar was measured before administration (at 0 minute), and after administration (30, and 60 minutes)(route of sampling and the analytical method). . Group 1: Control (administered 2 g/kg sucrose, no treatment). Group 2: Administered 2 g/kg b.w. sucrose after treatment with 50 mg/kg b.w. ethanolic or aqueous extract. Group 3: Administered 2 g/kg b.w. sucrose after treatment with 100 mg/kg b.w. ethanolic or aqueous extract. Group 4: Administered 2 g/kg b.w. sucrose after treatment with 200 mg/kg b.w. ethanolic or aqueous extract. Group 5: Normal (no sucrose, no treatment) Testing the effect of ethanolic/ aqueous extracts of the leaves after challenge with glucose solution In this experiment, 25 Wistar rats were divided into 5 groups of 5 rats each. Treatments were carried out orally for one day. Overnight fasted animals (group 2-4) were orally administered different doses of the extract 10 minutes prior to the administration of glucose at a dose of 2 g/kg(how). The blood sugar was measured before administration (at 0 minute), and after administration (30, and 60 minutes)(route of sampling and the analytical method). . Group 1: Control (administered 2 g/kg . glucose, no treatment). Group 2: Administered 2 g/kg b.w. glucose after treatment with 50 mg/kg b.w. ethanolic or aqueous extract. 87 Group 3: Administered 2 g/kg b.w. glucose after treatment with 100 mg/kg b.w. ethanolic or aqueous extract. Group 4: Administered 2 g/kg b.w. glucose after treatment with 200 mg/kg b.w. ethanolic or aqueous extract. 91 Group 5: Normal (no sucrose, no treatment) Comments on materials and methods	
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	The authors propose an α-Glucosidase inhibitors action for the plant but non of the methods adopted could prove such hypothesis and if the plant has such pharmacological action , what is the idea behind glucose (monosaccharide) administration. Would not be much suitable if this experiment is done on diabetic rats (where is the statistical analysis methods) Starting from line 106 the results has to be written as follows “Effects of ethanolic extract of Vitex doniana on postprandial blood sugar after sucrose ingestion A dose dependent decrease in postprandial blood sugar was evidenced after I hour of sucrose administration in ethanolic extract treated animals compared to the control values (figure 1). Similarly, after 30 minutes of sucrose ingestion, the glycaemic level was between 125-127mg/dl in the extract treated groups compared to a control level of 148mg/dl . Effects of aqueous extract of Vitex doniana on postprandial blood sugar after sucrose ingestion The results shown in figure 2 demonstrated a dose dependent decrease in blood sugar of aqueous extract treated animals .Similarly, there was significant decrease ($P<0.05$) in postprandial blood sugar after 1 hour in 100mg and 200mg/kg treated groups compared to control values. Effects of ethanolic and aqueous extract of Vitex doniana on postprandial blood sugar after glucose ingestion Data shown in figure 3&4 clearly demonstrated a non dose dependent decrease in blood glucose levels in ethanolic and aqueous extract groups compared to control values” Comments on results: The data has to be tabulated as means and standard error with * demarcating significance and not shown only in figures	
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	Why blood sugar level in rats treated with ethanolic extract and given sucrose are relatively high at the 0 minutes compared to the control. Discussion Line 167 needs a reference Line 174 needs a reference Line 179 needs a reference Line 183 omit hence Line 184 change ethanol by ethanolic Line 186 omit a non Line 186 change blood glucose by blood sugar Line 189 change blood glucose by blood sugar Line 186-188 did you statistically compare the blood glucose levels between sucrose and glucose administered groups!!!! Line 188 the rest of discussion should be written as follows “Sixty minutes After glucose ingestion, extract treated rats showed significant 189 reduction in postprandial blood sugar. As a result, this decrease in blood sugar level suggests that <i>Vitex doniana</i> may also be acting by other mechanisms than inhibiting α-glucosidases.” Comments on discussion: Again the discussion is inconclusive and written in a review pattern without any proof that lowering blood glucose level is accomplished by inhibiting α-glucosidases. Did the authors obtained any approval from husbandry committee	
<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments		