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Journal Name:	International Journal of Biochemistry Research & Review
Manuscript Number:	2014_IJBcRR_15610
Title of the Manuscript:	Biochemical Assessment of the Effects of Aqueous Stem bark Extract of Anogeissus leiocarpus on Wistar Strain Rats
Type of the Article	Original 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.

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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)
Compulsory REVISION comments	1. Besides the morphological description of the plant species, the authors may like to provide some traditional usage of this herb before prompting to the experimental work. 2. The extract was prepared by soaking 50 g of powdered stem bark in 200ml of sterile distilled water, shaken and allowed to stand for 24 hours. Extraction by soaking with cold water may not be a good method. The yield of the extraction should be evaluated. The authors did phytochemical screening to test the presence of alkaloids, saponins, tannins, phlobatannins, anthraquinones, cardiac glycosides, flavonoids and phenols. Those color reactions are pretty rough. These screening can only provide preliminary possible type of compounds in this plant species.	A decoction of the leaves of <i>Anogeissus leiocarpus</i> is used locally in North Eastern Nigeria for the treatment of skin diseases, itching and antidiarrhoea. The powder stem bark is applied to wound and ulcer to quicken healing. An infusion of the stem bark is given as febrifuge. Quantitative determination of phytochemical compounds A total phenol was determined using spectrophotometric method. Alkaloid determination was carried out as described by Harborne 1973. Tannins was determined according to the methods described by Van-Burden and Robinson,



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		1981. The methods used to determine saponin was Obadoni and Ochuko, 2001. Determination of flavonoids was carried out by the method of Boham and Kocipai-Abyazan, 1994.
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<u>Minor</u> REVISION comments	1. In table 5 and many part of the text, please leave a space before and after $\pm$. 2. In Line 19 on page 1, 500mg/kg should be corrected as 500 mg/kg. Leave a space between the numeric value and the unit. Please go through the manuscript and revise accordingly. 3. In Line 147 and Line 156, the reference “Sofowora (1993)” and Reference “Edward 1983” were not provided in the Reference section. 4. In Line 333, the reference “Sofowora, A. (1981). Man, Plants and Medicine in Africa: Some Fundamental Perspectives. Inaugural Lecture Series.No. 48. University of Ife Press, Ile-Ife.” was not cited in the text. 5. In Line 336, the publisher of the reference “Sofowora, A. (1982). Medicinal Plants and Traditional Medicine in Africa” was not provided.	Space before and after figures $\pm$ in table 5 Space between figure and units was been carried out e.g. 500 mg/kg Sofowora, A. (1993). Medicinal plants and traditional medicine in Africa. Spectrum book Ltd Ibadan. 289 Edward, A. I. (1983). Fundamental of Microbiology. Addison Wesley Publishing company, Inc. 691-693 The reference of Sofowora (1981) was deleted. John Wiley and sons
<u>Optional/General</u> comments	This manuscript phytochemically screened the aqueous stem bark extract of <i>Anogeissus leiocarpus</i> and	



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	found the presence of alkaloids, tannins, anthraquinones, saponins and phenols. Antimicrobial activity of the aqueous extract using <i>Escherichia coli</i>, <i>Streptococcus pneumoniae</i>, <i>Staphylococcus aureus</i> and <i>Klebsiella pneumoniae</i> as test organisms showed varying zones of inhibition with 10mm zone of inhibition exhibited by <i>Staphylococcus aureus</i> and <i>Escherichia coli</i> respectively. Minimum Inhibitory Concentration (MIC) and Minimum Bactericidal Concentration of extract were 16µg/ml and 32µg/ml respectively. Treatment of experimental animals with the aqueous stem bark extract for a period of six weeks and subsequent assessment of its effect biochemically revealed that alanine aminotransferase (ALT), aspartate aminotransferase (AST), acid phosphatase (ACP), and lactate dehydrogenase (LDH) levels were significantly higher than normal suggesting certain degree of liver injury. Glucose, cholesterol, total and direct bilirubin as well as total protein levels were significantly higher than normal values with respect to animals treated with 500mg/kg body weight suggesting a dose dependent effect of the extract on the animals. Urea and creatinine levels were slightly lower than normal. Tha authors concluded that the effect of the stem bark extract of <i>Anogeissus leiocarpus</i> was more pronounced on the liver than the kidney. Even though the results are interesting.	
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