



SDI Review Form 1.6

Journal Name:	<u>Journal of Advances in Medical and Pharmaceutical Sciences</u>
Manuscript Number:	Ms_JAMPS_24250
Title of the Manuscript:	ANTIOXIDANT PROPERTIES OF MORINGA OLEIFERA OIL AND ANACARDIUM OCCIDENTALE OIL ON CADMIUM INDUCED LIVER DAMAGE IN ADULT WISTAR RATS.
Type of the Article	Original Research Article

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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	The authors determined the antioxidant properties of oil extracts from Moringa oleifera seeds and cashew nut on cadmium induced liver damage. Although the introduction and objective of the study was good enough, the authors did not justify in the discussion that liver damage was induced. The discussion of the study is faulty and misleading and does not correlate with the result in the table. The authors misinterpreted the results as shown in my comments below. Pg 3 line 46 Leaves are longitudinally cracked leaves corrected- repeated word 'leaves' Pg 4 line 69 The commercial that phytochemicals entails in the antifungal activity should be rephrased Line 97 and 98 the word "were" should be deleted. Repeated word Line 100 botanical name of Moringa Oleifera should be written correctly and be unified in the manuscript Line 115 word weighting should be corrected Line 121 0.32ml (40mg/kg body weight)- you don't start a paragraph with figures. There should be space between the figure and the unit. This should be unified in the whole manuscript In the discussion, the argument on the inhibition of cadmium induced MDA production by the oils used is confusing and not clear. There is no clarity in your explanation and justification of the results. You said there is significant increase activity in liver tissue. Significant activity of what. Are you determining enzyme activity in lipid peroxidation induced by cadmium or what. The author should consult previous work in order to explain this aspect of the study. Alternatively you can check out this article (G Oboh, TA Olasehinde, AO Ademosun Essential Oil from Lemon Peels Inhibit Key Enzymes Linked to Neurodegenerative Conditions and Pro-oxidant Induced	



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	<u>Lipid Peroxidation</u>. Journal of oleo science 63 (4), 373-381) Line 168 the heading “Malondialdehyde (MDA) Activity in the liver tissue” Should be rephrased. You don’t determine malondialdehyde (MDA) activity in tissues. MDA is a byproduct of lipid production and what you are determining is the levels of MDA induced by cadmium and maybe your oil extract can prevent cadmium-induced MDA production. The whole explanation on MDA should be corrected. The authors should re-analyze the result. There is no correlation between the MDA results in the table and explanation in the discussion. It is confusing. The table shows that the oil extract including the vitamin A and E did not reduce cadmium induced MDA production in liver tissue. MDA levels should not be increasing. MDA is toxic to liver cells so if your oil extract has antioxidant activity, it should reduce the MDA content. The groups that were administered cadmium and oil extracts, cadmium and vitamin C and E should not have higher MDA levels than cadmium induced groups if your oil extracts were effective. However your results show that the oil extract did not prevent MDA production at the dose administered. A higher dose should be tested to see the activity of the oil extract on cadmium induced MDA production The same thing applies to the antioxidant enzyme activity The results were wrongly interpreted. The authors reported low levels of superoxide dismutase activity even lower than cadmium induced group and justified that the extract mop up free radicals. This is a wrong conclusion. The results and explanations are misleading. An evidence is the rats in group C that were given Vitamin C and E (tocopherol). It shows these antioxidants did not scavenge radicals induced produced by cadmium since the group had higher MDA than the control that received only buffer and low Gpx, and SOD than A and B. What the authors are saying is that phosphate buffer had more antioxidant activity than Vitamin C and E. I think the dose that was used in this experiment was too low to scavenge the radicals that were induced by cadmium I suggest that the total phenol content and flavonoid content including characterization of the oil extracts be determined so that the authors will be able to justify clearly if they contain antioxidants that can scavenge free radicals. Furthermore, the authors will be able to justify the radical scavenging mechanisms involved. Lastly, the authors should state if there any animal ethics committee approval was received and include the reference number of the approval	
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Minor REVISION comments	Clarify the plagiarism issue: The manuscript may be highly plagiarized with about 50% originality The following web pages may contain content matching this document: • https://en.wikipedia.org/wiki/Moringa_oleifera • http://moringablog.info/wp-content/uploads/2014/03/Moringa-oleifera-medisch.pdf • http://scholarsresearchlibrary.com/DPL-vol3-iss2/DPL-2011-3-2-141-164.pdf • http://www.rjpbcs.com/pdf/2015_6(4)/[232].pdf • http://www.readbag.com/scholarsresearchlibrary-dpl-vol3-iss2-dpl-2011-3-2-141-164 • http://www.scientificjournals.org/journals2008/articles/1315.pdf • http://link.springer.com/article/10.1007/s10853-009-3834-8/fulltext.html • http://link.springer.com/content/pdf/10.1007%2Fs10853-009-3834-8.pdf • http://www.researchgate.net/profile/ZORICA_SAICIC/publication/267030235_Effects_of_cisplatin_on_lipid_peroxidation_and_the_glutathione_redox_status_in_the_liver_of_male_rats_The_protective_role_of_selenium/links/02bfe50cdf6e0a17e0000000.pdf • http://www.academia.edu/4166242/Protective_Effect_of_Curcumin_on_Anxiety_Learning_Behavior_Neomuscular_Activities_Brain_Neurotransmitters_and_Oxidative_Stress_Enzymes_in_Cadmium_Intoxicated_Mice • http://www.sciencedirect.com/science/article/pii/S089062380900327X • http://www.thefreelibrary.com/Heavy+metal+induced+oxidative+stress+%26+its+possible+reversal+by...-a0192258143 • http://onlinelibrary.wiley.com/doi/10.1111/j.1742-7843.2011.00718.x/full http://www.sciencedirect.com/science/article/pii/S0048969706007388	
Optional/General comments	The authors should increase the dose of the extracts and determine the antioxidant effects of the oil at the new dose administered.	

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