



SDI Review Form 1.6

Journal Name:	Annual Research & Review in Biology
Manuscript Number:	Ms_ARRB_41988
Title of the Manuscript:	Comparative study between powder and nanoparticles of dried cactus (Opuntia ficus-indica L.) fruit peels in streptozotocin-induced diabetic rats: Anti-microbial and anti-genotoxic capacity
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. 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)
Compulsory REVISION comments	<p>Abstract</p> <ol style="list-style-type: none"> 1. "Furthermore, nanoparticles of dried cactus fruit peels was (were?) more effective in control glucose levels, gene expression, antimicrobial and antigenotoxic activities compared with powder materials even in its low dose." - In conclusion this significant finding is not explained. <p>Introduction</p> <ol style="list-style-type: none"> 2. "Additionally, the WHO reports estimates that the DM disease will increase in number to reach three hundred and sixty million people by 2030 [2, 3]." You refer to WHO reports but cite Frati-Munari et al. (1988, 1989). 3. Poor grammar throughout paper: Examples: <ul style="list-style-type: none"> • There are several ways to treatment diabetes • insulin and other medical therapyies • To overcome the toxic effects attributed to the use medicinal treatments to maintain glucose levels in blood inat normal profile levels, there is a desire toward using natural food and folk remedies [1]. Additionally, many scientists are encouraging to conducting experiments to discover substances extracted from food ingredients and natural resources which could reduce the glucose levels in the blood [5-7]. • One of the important studies in regard to treatment of diabetes using natural products is that on <i>Opuntia</i> species [1]. • Despite of the people are not digest the... • The paper must be proofread by a proficient English editor. 4. "It has been reported that dietary fibers are categorized in 2 classes as water soluble and non-water soluble dietary fiber." - Where has this been reported 5. "Several reports suggested that the glucose decreased in the blood by water soluble dietary fiber, because the intestine extends passage of food including the dietary fiber compared with other food without fiber contents [1]."- Several studies, but you only cite one study? <p>Materials and Methods</p> <ol style="list-style-type: none"> 6. Normal control group? Was there an abnormal control group? 7. "The dried Cactus fruit peels (<i>Opuntia ficus-indica</i>) were collected from private farm in Giza Governorate and dried immediately by means of solar energy" - What was the temperature of the solar energy? <p>Results</p> <ol style="list-style-type: none"> 8. "Mycotoxins determination: The results showed that no detection of the three mycotoxins was found in either powder or nanoparticles of dried cactus fruit peels." - indicate the three mycotoxins 9. "...cactus fruit peels decreased significantly (P<0.05) compared with those in pancreas tissues of..." Dissection of this tissue described? <p>Discussion</p> <ol style="list-style-type: none"> 10. Suggest using the same headings as in the results for easier orientation and understanding. 11. "In great agreement with our results, Trejo-González et al. [8] have been used extracts of <i>Opuntia</i> species to reduce blood glucose levels in diabetic-induced mice using streptozotocin (STZ). They are founding that diabetic-induced mice treated with <i>Opuntia</i> species extracts reduced the glucose levels in the blood. Additionally, Hwang et al. [1] reported that fresh Nopal (<i>Opuntia ficus-indica</i>) extract decreased blood glucose levels in diabetic rats." - It is not good enough to indicate similarities or differences with similar studies. If similar, then what does the trend indicate, what are the reasons for the trend, what are the implications of the trend, what are 	<p>Thanks for your comments.</p> <ul style="list-style-type: none"> - We have changed was by were. - We have mentioned the nanoparticles in the conclusion <p>We have cited the correct WHO references</p> <p>Thanks for your comments. We have corrected the grammar mistakes and read by a proficient English editor</p> <p>This sentence was cited in Reference [1]. We have mentioned it in the text. We have cited the References of the reports [1,9, 10]</p> <p>Thanks for your comments.</p> <ul style="list-style-type: none"> - We corrected it to control group - The temperature of the solar energy ranged 50 and 60 °C. We mentioned it in the text. <p>Thanks for your comments</p> <ul style="list-style-type: none"> - The three kinds of the mycotoxins (ochratoxin A, aflatoxins (B1, B2, G1 and G2) and zearalenone) was mentioned in the text - Dissection of this tissue described in the experimental design. <p>The discussion of the study are written and interpreted according the mechanism of action of the fruit peels (<i>Opuntia ficus-indica</i>) . Also many of the parameters used are related to each other. So, we can't discuss the findings using the same headings as in the results.</p> <p>Thank you, we have described the differences between our findings and their results.</p> <p>Thanks for your comment: Our suggestion is according to Berraaouan et al. [33] in the above paragraph, who reported that fatty acids in the oil extracts of cactus pear seed (CPSO) exhibited high antioxidant activity alloxan-induced diabetes in mice preventing DNA structure from damage.</p> <ul style="list-style-type: none"> - The Ethical committee of our Institution had accepting the



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	<p>the implications from your results, what are the recommendations stemming from your results. If different to other similar studies, then the difference, what are implications of the difference, what are the recommendations stemming from the difference. Etc. Etc.</p> <p>12. "Moreover, the present results revealed that cactus fruit peels extracts exhibited fatty acid compounds which could be responsible for its antioxidant capacity." – What is the mechanism for this effect?</p> <p>13. Ethical Issue: Animals were sacrificed for pancreas tissue examination. Although the paper indicate that animals were treated in compliance with the guidelines of the Ethical Committee of National Research Centre, Egypt, which follows the recommendations of the National Institutes of Health Guide for Care and Use of Laboratory Animals (Publication No. 85-23, revised 1985), <u>it never indicates if Ethical Clearance were sought and received from the hosting institution.</u></p> <p>14.</p>	experimental plan including these procedures.
Minor REVISION comments		
Optional/General comments		