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Journal Name:	Journal of Scientific Research and Reports
Manuscript Number:	Ms_JSRR_41674
Title of the Manuscript:	ALTERATIONS IN STEROID SEX HORMONES (17β estradiol and testosterone) OF Clarias gariepinus EXPOSED TO DIFFERENT SUB-LETHAL CONCENTRATIONS OF CYPERMETHRIN
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that <u>NO</u> manuscript should be rejected only on the basis of '<u>lack of Novelty'</u>, 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	1) This long paragraph must be removed from the abstract and replaced with data from the two hormones showing the particular trend. The paragraph can just form part of recommendations as it has occupied space necessary for important data. Despite the adverse effect of cypermethrin on fish reproduction (production of 17β-	
	Estradiol and testosterone) and other physiological processes, it will be a setback to Agricultural productivity pesticides if the use of pesticides are totally banned. As a result, we recommend that the Government sensitizes the farmers properly on the proper quantity of pesticides to be applied at a time, enforce against excess application of pesticides in quick succession in order to ensure sustainability of our fishery resources. More of similar studies should be funded in order to continue to monitor the level of the effects of various pesticides on fishes and the aquatic eco-system at large.	
	2) Preparation of working solutions of cypermethrin needs to be clear as nothing about the purity of the cypermethrin is indicated. And what was the concentration of this stock solution?	
	3) For all the plots, that error bars don't tally with the information in the manuscript. It's like the graphs were plotted using a uniform error likely at 5% and so all these need to be redone to reflect the correct change error-wise.	
	4) For each kit for ELISA, please indicate the conformity of your readings with the standard.	
	5) The axes of all graphs must be distinct and use different colour with appropriate major and minor ticks.	
	6) Figure 8 is wrongly plotted. The last two concentrations seem to have the same value yet their heights are totally different, the 0.100 ppm plot has no error bar.	
	7) Volume of aquariums is about 6000 cm ³ = 6 litres. Yet each aquarium took about 25 litres of water. This reviewer is confused. Can the author elaborate?	
	8) This research has not ascertained the levels of cypermethrin in the water before the start of the experiment and also the final concentration in 25 litres should be reported as what has been reported seems to be normal dilutions as the water was being changed every 72 hours. In each case, bioconcentration and bioaccumulation would be expected to take place and at each period of sampling for blood, the total toxicant should have been measured to correct for either instantaneous depletion of cypermethrin upon change of water.	
	9) It's not clear whether the water exchanged was laboratory water or culture water?	
	10) Author must explain sampling period as the paper cited for extraction of steroid hormones has reported circadian variation of these two hormones under this study.	
	Ethical Issue- Bioethical clearance for material that can contain DNA or any biological samples involving blood require ethical approval but none has been recorded to have been produced Use of fish as a laboratory animal model needs ethical clearance	

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Minor REVISION comments	A lot of editorial issues bordering on inappropriate use of the correct TENSE, plural words, omitting the connecting articles "a" and "the" in some cases. Line 6 in abstract- sub-adult should be sub-adults Clarias gariepinus first appears on page 3 of 14 and subsequent usage must be C. gariepinus. Throughout the manuscript, spacing between a value and units must be done as is acceptable under SI units reporting style. Volume units to change from "ml" to "mL", "µl" to "µL"and concentration units to change from e.g. "pg/ml" to "pg/mL" respectively. Introduction Line 4 - the word organism must be organisms Line 5- "and is a broad based spectrum" is wrong syntax wise and seems to hang Line 19- "such" is missing between "chemicals" and "as" Line 25- "the" is missing between "ln" and "ovary" Line 25- amount must be amounts Line 26- put "the" before liver Line 27- lead must be leads Line 29 O. niloticus is being used for the first time so its full form must be used before the contracted form. Line 31- decrease to decreased	
	Page 3 of 14 Preparation of stock solution Simply use Arabic numerals than words "nine hundred and ninety" and "ten" Experimental design 25x 15.5 x15.5 cm³ does not tally with 25 liters volume of the aquarium The protocol does not state how much blood was collected let alone the syringe size of 5mL	
	Page 4 of 14 Determination of sex steroid hormones Line 3 of the paragraph- "5mL of diethylether" is hanging Statistical analysis Line 6 of the paragraph- it should be Graphpad Prism and version	
	Page 11 of 14 Spelling of chlorpyrifos needs to be corrected	
Optional/General comments	Before accepting this paper, the author need to take it for a professional English editor to remove so many typographical errors and improve on the use of correct English wording to have sentences connected properly.	

Reviewer Details:

L	Name:	James Nyirenda
	Department, University & Country	Zambia

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