Reviewer’s report

Title: Anti-inflammatory and cytotoxic evaluation of extracts from the flowering stage of Celosia argentea

Version: 3 Date: 27 Feb 2020

Reviewer: Research Square Reviewer 1

Reviewer's report:

PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses one or several testable research questions? (Brief or other article types: is there a clear objective?)
Yes - there is a clear objective

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?
Yes - the approach is appropriate

EXECUTION - Are the experiments and analyses performed with sufficient technical rigor to allow confidence in the results?
Yes - experiments and analyses were performed appropriately

STATISTICS - Is the use of statistics in the manuscript appropriate?
Yes - appropriate statistical analyses have been used in the study

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?
Yes - the author's interpretation is reasonable

OVERALL MANUSCRIPT POTENTIAL - Has the author addressed your concerns sufficiently for you to now recommend the work as a technically sound contribution? If not, can further revisions be made to make the work technically sound?
Yes - current version is technically sound

PEER REVIEWER COMMENTS:

GENERAL COMMENTS: Overall, the authors did a good job addressing concerns.

REQUESTED REVISIONS:
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I would like them to include the DMSO control. *This is now included*
I would also like them to clarify that trial #1 and trial #2 were different planting seasons (they did this in the letter but I cannot find this in the manuscript). *this is now included in the manuscript*

They still overstate their results "The non-toxic potential of all the extracts in this study corroborates the traditional use of the plant as vegetable and medicine; and indicates that C. argentea could be safely used as an anti-inflammatory agent with no side-effects." The compound was non toxic in their experiments, but this does not mean it will be non-toxic without side effects in vivo. **This has been changed in the discussion and is now appropriate in my opinion**

ADDITIONAL REQUESTS/SUGGESTIONS:
All critical revisions have been made and my opinion is that the manuscript is much stronger than the original version.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable
Declaration of competing interests

Please complete a declaration of competing interests, considering the following questions:

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2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?
3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?
4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?
5. Do you have any other financial competing interests?
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If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

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