Reviewer's report

Title: Prevalence of Hyperuricemia and its Related Risk Factors in Healthy Adults of Northern and Northeastern Chinese Provinces

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Reviewer: Liegang Liu

Reviewer's report:

Comments:

In this paper, the authors examine protective effects of Curcumin and Diclofenac Sodium against ccl4 and I/R induced hepatic injury. But this reviewer has serious questions regarding experimental design, presentation of the data and English expression.

Major comments:

1. Curcumin and Diclofenac Sodium have the different mechanisms (antioxidant and anti-inflammatory, respectively) against hepatic injury. Why did the author combine the different substances with different models of hepatic injury, and I doubt what is the relationship between these two drugs.

2. The authors only used one dosage of each drug in the study, it is hardly to evaluate the protective effects. So I think that this study design is not scientific.

3. The authors reported that ccl4 and I/R affected gross liver appearance, but did not report any histopathological examination.

4. The data shown in this study are difficult to understand. What is the mean of mark “*” in all tables.

5. The present manuscript requires extensive editorial re-write. There are many problems with both spelling and grammar. This negatively affects the impact of the manuscript and makes it difficult to interpret the results.

Comments

In this paper, the authors aimed to determine the protective role of EGCG against behavioral changes induced by aging through modulating the activity of acetylcholine esterase and neurochemicals. The present work showed potential interesting point, but I think the research lacks of more originalities because the similar conclusion about relationship between EGCG and acetylcholinesterase activity or behavior were published in some previous studies (Anand Kamal Sachdeva et al. Epigallocatechin gallate ameliorates behavioral and biochemical deficits in rat model of load-induced chronic fatigue syndrome. Xiao J. et al. Investigation of the mechanism of enhanced effect of EGCG on huperzine A's inhibition of acetylcholinesterase activity in rats by a multispectroscopic method.)

Major comments:

1. The author paid more attention on the background but less of results in the
abstract, this part need re-edition.

2. Please introduce the basis of EGCG dosage in the study. I think that the dosage (only 2 mg/kg) and sample size (six per group) were not very effective to verify the conclusion.

3. The author used a bioinformatics tool to dock the ligands such as EGCG, acetylcholine and donepezil with target AchE enzyme. Are these results verifiable in the experiment?

4. In the conclusion, the author said "It could be concluded that oxidative stress would have modified AchE's active site thereby decreasing its affinity to the substrate." However, the oxidative stress not appeared in this study design.

Minor comments:

1. Please provide the reference of acetylcholine, dopamine and serotonin determination.

2. There are many unscientific descriptions in the paper. For example: Page 5: 150 ##20g, a space was missed. Page 7: what is the unit of 3000? rpm or g?

Comments

In this paper, the authors aimed compare the effects of feeding HGSO to a generally recognized as safe source of GLA, borage oil, in a 90 day safety study in rats. This study is interesting and well performed. The rationale, experimental procedures and data presented in this manuscript are sound, but a few issues will need to be addressed in order to make this manuscript suitable for publication.

Major comments:

1. As a study of safety evaluation, I think that the only one dosage level is hard to determine the dose-response relationship which is very important to evaluate the toxicity.

2. page 12, line 24-28: The author said: Any statistical differences between the borage and HGSO groups for either male or female rats were minor and well within the normal range of variation for each particular hematological or biochemical parameter. Thus these findings were considered clinically insignificant. But it is not scientific. The author should provide powerful evidences to verify these significant differences were not related to the toxicity. For example, the histopathological examination for liver function anomalies.

Minor comments:

1. Lots of writing mistakes should be noticed in present manuscript. For example, all the P value in this paper should be italic. Page 14, line 48, 49: gm or mg? and all the decimals in the tables should be uniform.

1. Figure 1 was not needed.

2. Figure 4. The groups should be showed in different chart form.

3. The reference form was not fit the requirement of FCT.
Comments

In this paper, the authors aimed to evaluate the safety of Cocoa tea extract through acute and subacute toxicity studies. The data can be regarded as an interesting contribution in the current toxicological testing, the scope of this research is unclear but important. But this reviewer has serious questions regarding experimental design, presentation of the data and English expression.

Comments

1. A subchronic toxicity study is a 91-day or 13-week feeding study (Repeated Dose 90-day Oral Toxicity Study in Rodents. 408. OECD GUIDELINE FOR THE TESTING OF CHEMICALS). This present study is only a subacute toxicity study.

2. Page 3, line 6 and 26. The author said the plant was discovered by Professor Chang Hung-ta in 1981, but the cocoa tea, as the traditional tea, its potential biological effects also has been reported. Is year 1981 traditional? Please give the voucher specimen and where it's deposited, the family name of Camellia ptilophylla.

4. The doses (800 mg/kg/day) of Cocoa tea extract in the subacute study seems too low, it is hardly to evaluate the No-observed-adverse-effect level. Please introduce the principle of dosage selection. The authors did not use the same animals to proceed this study, what is the connection between the two studies? Whether the author used the LD50 as the reference to determine the high dose level (20% of LD50) in the subacute study?

5. The author said that Cocoa tea significantly reduced the levels of AST and ALT and this indicated that Cocoa tea may have hepatoprotective effect. This description is not agreeable, because it is not a hepatotoxicity or Hepatic injury medol. In this toxicity study, the author should discuss whether these results link to toxic effects.

6. The guidelines of acute and subacute studies should be supplied.

7. In the acute study, when the doses were 5.06 g/kg or higher, all the mice died within 72h after the treatment. Please give the pathological findings.

8. The manuscript needs attention to English editing, there are many unscientific expressions and grammar mistakes. For example, a space is need between number and unit.

9. The reference form is not fit the requirement of FCT.

Comments

In this paper, the authors aimed to discuss the effects of excitatory amino acid homocysteine (Hcy) to cell proliferation in fetal neural stem cells (NSCs). This study is interesting. The rationale, experimental procedures and data presented in this manuscript are sound, but a few issues will need to be addressed in order to make this manuscript suitable for publication.

Major comments

1. The most important regulation of ERK singling pathway was the
phosphorylation, the mRNA level can not reflect this activation process. Therefore, this part of result can be removed in the paper.

2. In pervious study, Hcy induced ERK phosphorylation in microvascular endothelial cells (Moshal et al), which was different from your study. The author said that this effect could be abrogated by treatment of folate. I want to known what is the affect of folate in NSCs proliferation

3. All the results of Hcy treatment groups can be only compared with the controls.

4. The manuscript needs attention to English editing, there are many unscientific expressions and grammar mistakes.

Minor comments:

5. The animals and feeding conditions should be described in the present manuscript.

6. A space should be inserted between the number and unit.