Reviewer’s report

Title: 1HNMR-based Metabonomic profile of Rats with Experimental Acute Pancreatitis: a controlled experiment

Version: 1 Date: 23 March 2014

Reviewer: Qingchuan Zhao

Reviewer’s report:

This study compared the metabolic profile between rat with AP and sham laparotomy. The results provide the information of a different metabolic profile between the two groups.

Major comments

First, it is not explained in the text what is the meaning of investigating those parameters in early stage of AP. The author stated that it may “allow early diagnosis”, however, compared with serum amylase, those biomarkers may be cumbersome to use in diagnosing AP and their accuracies are not investigated. Additionally, why the authors consider these parameters are helpful for investigating the pathogenesis of AP or indentifying potential therapeutic targets? Whether the changed metabolic profile correlated with the severity of AP? These questions are not explained and make the whole manuscript unintelligible.

Second, it is reported that the blood samples were obtained 12 hours after AP induction. What is the reason that the 12 hours is chose? What about the biomarkers levels in an even earlier stage of AP?

Third, the metabolic disturbance detected in the AP group may not be specific for AP. It is possible that the changed metabolic profile is caused by excessive inflammation rather than pancreatitis.

Minor comments

It is not a randomized controlled trial. RCT is used to test the efficacy or effectiveness of various types of medical intervention within a patient population.

Spelling mistakes such as “the two groups shew a jumbly distribution”, “Comparisons of small molecule metabolites clevels between AP and SO group” The “Compared to sham operation group (SO)” in the tables should be described in the foot note.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.
Declaration of competing interests:

I declare that I have no competing interests.