Reviewer's report

Title: Effects of KH-204 on the expression of heat shock protein 70 and germ cell apoptosis in infertility rat models

Version: 1 Date: 28 July 2014

Reviewer: Daisuke Ekuni

Reviewer's report:

Major Compulsory Revisions

Comments

The paper shows that KH-204 intakes increased the mean weight of the cryptorchid testes and levels of SOD, restored sperm counts, motility and germinal cell layer thickness, and decreased levels of 8-OHdG, HSP70 levels and apoptosis using an infertility model.

This is an interesting study. However, I would like to make some points regarding the manuscript. The article needs to be revised.

Comments in detail:

ABSTRACT

1) The conclusion should be changed, because the authors don’t have data to investigate some mechanisms.

INTRODUCTION

1) Please add the hypothesis.

MATERIALS AND METHODS

1) Did the authors check the daily volume of KH-204 that animals took? This is an important point in this study.

2) Why did the authors pick up only 8-OHdG, SOD and HSP70? Please clarify that in the text.

4) If the authors want to say change of the testicular function via the reduction of HSP70 expression and apoptosis, additional experiments and some data to support mechanism are required (see above).

RESULTS SECTION

1) In the figure legends, the number of animals and name of statistical analysis needed.

2) The necrosis is unclear in the Figure 2. Please change the photograph.

3) Please add the name of panel, i.e., (a) and (b) in the Figure 4.

4) The mark “†” is wrong in the Figure 5.
DISCUSSION SECTION

1) Please add the comments about limitation (no time-course data, no data of other possible related parameters, no data to support some mechanisms) in this study.

2) The conclusion should be changed (see above).

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

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

'I declare that I have no competing interests'