Reviewer’s report

Title: The Hypocholesterolemic Activity of Thai Glutinous Rice (Oryza sativa L. var. Niaw San-pah-tawng) Fermented by Monascus purpureus in High-Fat Cholesterol Diet Fed Rats

Version: 4 Date: 20 November 2014

Reviewer: Watee Kongbuntad

Reviewer’s report:

1. Major Compulsory Revision -none-

2. Minor Essential Revisions

Methods
- The 4th paragraph (Diet and hypercholesterolemia induction)
  # Please mention the sex of rats used in this experiment

Results
- The 1st paragraph (Acute toxicity study)
  # The safety of tested extract should be mentioned here.

- The 3rd paragraph (Effect of RYR administration on serum cholesterol)
  # Please make this sentence more understandable “Administration of RYR extract at doses of 1.0 g/kg/day and 2.0 g/kg/day significantly lowered LDL-C levels by 37.42% and 47.37% in the HFC-control group, respectively (p < 0.05)”

- The 5th paragraph (Effect of RYR administration on hepatic mRNA expressions)
  # Please make this sentence more understandable “The highest mRNA expression of CYP7A1 was observed in the HFC-control group, while in the rats fed with a HFC-diet with RYR, (HFC-1g and HFC-2g) and rosuvastatin (HFC-rosuvastatin), this significantly decreased when compared with the HFC-control group (p < 0.05). The mRNA control group, respectively (p < 0.05)”
  # The highlighted phrase should be changed to “the hypocholesterolemic rats treated with…”

- The 7th paragraph (Effect of RYR administration on macroscopic and microscopic of liver)
  # Please change the highlighted phrase to “macroscopic and microscopic structures of the liver”

Discussion
- Please discuss in more details about the mechanism of fat accumulation in the
liver.

- The 3rd paragraph
# References number 17 and 13 should be cited in the separated sentences. Such that long sentence really make the readers confused.
# The definition of Monakolin K was mentioned repeatedly (at least twice). Please exclude some of them.

- The 4th paragraph
# “atherosclerotic index value” should be used instead of “atherosclerotic index” when the authors mention the decrease or increase of this index.
# The definition of Monakolin K was mentioned repeatedly (at least twice). Please exclude some of them.

- The 8th paragraph
# The long sentence concerning the comparison of “the amounts of steatosis” between HFC-2g, HFC-rosuvastatin and SP-control groups is very confusing. Please revise it and make it more understandable.

4. Grammatical errors
- Results; The 1st paragraph # There were no significant differences.
- Discussion; The 3rd paragraph# “substance” should be used instead of “chemical” in the sentence “mevalonate [19], which is the first key chemical in the biosynthetic pathway.”
- Discussion; The 6th paragraph# “densities” should be used instead of “concentrations” in the sentence “Also, rats treated with red yeast rice, at 1.0 g/kg/day and 2.0 g/kg/day, showed amounts of steatosis with inflammatory cells in lower concentrations than the HFC-control group.”

- Figure 3; Microscopic characterization of liver tissue. # “characters” should be used instead of “characterization”
- Figure 3; # “were” should be used instead of “was” in the sentence “Lipid deposition in hepatocyte …… and nuclear condensation (head arrow) was observed in the liver of hypercholesterolemic rats “

Level of interest: An article of importance in its field

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' below