Reviewer's report

Title: Antihyperglycemic and antihyperlipidemic activities of aqueous extract of Hericium erinaceus in experimental diabetic rats

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Reviewer: Mariko MU Uehara

Reviewer's report:

Major comments

The authors have investigated that antihyperglycemic, antihyperlipidemic antioxidative activities of Hericium erinaceus in STZ-induced diabetic rats. Health effects of Chinese mushrooms are interesting and promising. However, the authors should have shown active compounds in AEHE, at least speculated those in the “Discussion” section. The data were clear, but there was no discussion about the mechanism on these hypoglycemic, hypolipidemic and antioxidative effects of AEHE, although the mechanism is the most important point for this manuscript. Since several manuscripts on Hericium erinaceus has been published, even the authors firstly used diabetic rat, the power of this study is weak without the explanation of active compounds and the mechanism. Furthermore, there are serious concerns on statistics, because the authors did not mention about any method of statistical analysis in the text.

General comments

1. The authors should have used a semi-purified diet as AIN-93 for this study. Some similar active compounds might be contaminated in the standard commercial pellet diet.

2. Please clarify the method of statistics in the text.

3. Please clarify about “glibenclamide”, and compare with the efficacy of AEHE, not only in “Results” section, but also “Discussion” section including its pharmacological action.

4. There was no Table 1 for body weight of animals. Food intake of animals is also important.

Specific comments

1. Page 4, Line 6 from the bottom, male Wistar rats? “r” was missing. It should be not italic.

Level of interest: An article of limited interest

Quality of written English: Acceptable
Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests.