Reviewer's report

Title: Training exercise at the aerobic/anaerobic metabolic transition prevents glucose intolerance in neonatal alloxan treated rats

Version: 1 Date: 25 October 2007

Reviewer: Cheng Juei-Tang

Reviewer's report:

-------------------------------------------------------------------------------

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

The present study used alloxan to induce type-2 diabetic animal model. Then, authors demonstrated that exercise training is helpful for improvement of insulin resistance. It seems interesting. But some points as the follows shall be concerned.

Major Points:
1. The method using alloxan to induce type-2 diabetes shall be added the reference(s). If authors were the first one to develop this method, please explain the dose of alloxan, the date for injection and the female rats used for injection.
2. The presence of insulin resistance in this animal model shall be characterized. It is hard to find the difference in HOMA values between alloxan-treated group and vehicle-treated control. How do you know this model is reliable?
3. Exercise training employed the different way, but not the running as regular. Please add the reason(s).
4. The blood sugar level in this model shall be indicated. Then, changes of blood sugar need to show in detail.
5. Effort test needs more detailed statements and reference(s). Also, the relationship is reliable in human subjects. But is it also related in animal? Please add more data.

Minor Points:
1. The references show too much of human data. But the related and recent references for animals were not indicated. It shall be improved in detail.
2. Expression of data in figures need to improve. It is not easy to follow.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests.