Reviewer's report

**Title:** Brain injury associated biomarkers TGF-β21, S100B, GFAP, NF-L, tTG, Aβ2PP, and Tau enhanced and UPS impaired concomitantly during acute brain injury caused by Toxocara canis in mice

**Version:** 1  **Date:** 29 February 2008

**Reviewer:** Nobuaki AKAO

**Reviewer's report:**

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- **Major Compulsory Revisions**

1. There are so many unfamiliar abbreviations in the text, such as BIAB, UPS, CT, TBI, and so on, which make the readers prevent understanding. For example, PD is appeared only once in the text on Page 21.

2. Why does the NF-L and TGF-beta of infected mice at day 3 and 1 weeks of infection [Fig. 5 (A) and Fig 6 (A)] is lower than those of uninfected mice? Clarified this point.

3. Regarding the discrepancy between biomarker proteins, TGF-beta and S100B and mRNA expression (Page 21, 1st paragraph), why dose the authors speculate that the transcription for those biomarkers stop by 8 weeks of infection? The larvae in the brain are still active beyond this point.

4. Why do the biomarkers of nerve cell damage rise, although no histopathological changes are observed. Besides, the authors described that astrogliosis was apparent in the injured areas where the larvae migrated (Page 17, line 4-7). Astrogoliosis is a pathological change that can be observed microscopically.

- **Minor Essential Revisions**

1. Page 3: The statements in the â##Conclusionsâ## are inconsistent with the â##Conclusionsâ## in the text (Page 22).

2. Page 13, paragraph 2: The authors stated that GFAP expression was detectable in both infected and uninfected mice. However, the authors declared, â##In contrast, GFAP expression was detectable in uninfected mice.â## These sentences do not make sense for this reviewer.


4. Some typographic errors are found in the Reference section â##e.g. #34, 56
and 67.

5. In Figure Legend, the authors used the word \textit{asterisks} to indicate the statistical significance, but in the Figure they used \textit{###} \textit{###} \textit{###} is not asterisk. Figure 5B, 5D, 6B, 6D, 7B, 7D, 8B, 8C, 8E should be amended.

**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:** 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.