Reviewer's report

Title: Multivariate Profiling of Neurodegeneration-associated changes in a Subcellular Compartment of Neurons via Image Processing

Version: 2 Date: 28 October 2008

Reviewer: Ding Zhaohua

Reviewer's report:

1. The question posed by the authors is reasonably new and well defined.
2. The methods are appropriate and described in sufficient detail.
3. The data are sound and well controlled.
4. Adherence of the manuscript to the relevant standards for reporting and data deposition: unknown.
5. The discussion and conclusions are well balanced and adequately supported by the data.
6. The title and abstract accurately convey what has been found.
7. The writing is excellent.

Detailed Report:
The authors have mostly adequately addressed the issues raised in the first review. In the revised manuscript, three minor essential revisions are suggested:

1. Page 10, Paragraph 3: Using the minimum value in a 15x15 window as the background intensity may not be as stable as using a set of low value pixels (e.g., mean value of lower 10% pixels in the histogram, etc).
2. Page 11, Paragraph 1: “In such cases, the density measure is based on the largest cluster of spots in that section”. Will this introduce certain bias in the density estimation? If so, which direction is it biased toward?
3. Figure captions do not match the figures (shifted in number).

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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.