Reviewer’s report

Title: Mechanisms of Escape Phenomenon of Spinal Cord and Brainstem in Human Rabies

Version: 1 Date: 13 September 2005

Reviewer: Bernhard Dietzschold

Reviewer’s report:

General
In this paper Junbtrakul et al. attempt to correlate the extent of neuronal infection and apoptosis in particular regions of the CNS with neurological symptoms of human rabies victims. The investigators made the interesting observation that despite an abundant RV infection in the spinal cord and brain stem, no or only a low number of apoptotic neurons can be detected in these regions of the CNS. They conclude that this phenomenon might explain the absence of motor weakness and preservation of consciousness often seen in human rabies patients. Although the authors provide some valuable information, there are also some problems with this paper.

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

1) Only double staining of brain sections for RV antigen and apoptosis markers would allow a direct comparison of RV infection and apoptosis in neurons. It is not clear from the description of the methods and results whether double staining was actually performed.
2) The paper would greatly benefit from the presentation of figures showing immunostained sections obtained from representative regions of the CNS.
3) Instead of the subjective plus/minus scoring of stained section shown tables 1 and 2, a morphometric analysis (e.g., cell counts/mm² plus statistical analysis) would be more appropriate to support the conclusions drawn in this paper.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Discretionary Revisions (which the author can choose to ignore)

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: No
Declaration of competing interests:

I declare that I have no competing interests.