Reviewer's report

Title: Selected statins produce rapid motor neuron loss in vitro

Version: 2 Date: 20 January 2012

Reviewer: Lorne Zinman

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Intriguing study providing valuable information regarding toxicity of statins in rat spinal motor neurons.

Minor Essential Revisions:

1 - study demonstrated statin effect in 'spinal' motor neurons. What about effect in 'cortical' motor neurons? Were cortical 'motor' neurons included in paradigm testing cortical neurons that demonstrated no effect of statins? Authors need to clarify and if not, must restrict their conclusion to 'spinal' motor neurons only and make this distinction clear in manuscript.

2 - The rat model used in study was not an ALS animal model. While this is a good place to start, it would be of interest to determine effect of statins on rate of motor neuron degeneration in an ALS animal model. ALS experts generally do not think statins cause ALS, the controversy revolves around the effect of statins on disease progression. It would be most informative to determine the effect of statins on damaged ALS motor neuron.

The authors should mention this distinction and I encourage them to perform this study in the future on an ALS mice/rats if not already planned.

3- typo pg 3 para 2 - change "excetion for" to "except for"
4- page 10 para 1 - last sentence - inference to fluvostatin difficult to understand here. best to remove this sentence or clarify.

Level of interest: An article of importance in its field

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.