Reviewer’s report

Title: Association between novel TARDBP mutations and Chinese patients with amyotrophic lateral sclerosis

Version: 1 Date: 9 October 2009

Reviewer: Roberto Del Bo

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In this study the authors have analysed TARDBP mutations in 71 sporadic and in 5 familial ALS Chinese patients. They sequenced the entire TDP43 coding region and found a novel heterozygous variation (namely, Ser292Asn) in one FALS patient. Furthermore, several polymorphic variants have been observed and reported.

The variation was absent in 200 unrelated healthy subjects. No TARDBP mutation was observed in SALS patients. The frequency of TARDBP mutation is lower than other studies.

The data extend the spectrum of TARDBP mutation

The paper is well written; however, I have the following major comments for the authors:

1) The demonstration of the causative role of the TARDBP mutation in ALS pathogenesis is very weak within the family. Are the authors able to perform functional experiments to support the pathological role of p.292Asn mutation?

2) The cohort of ALS patients analysed is small compared to other studies.

3) Have the authors analysed FUS/TLS gene in their cohort of patients (at least in all FALS patients)? I think that it must be performed.

Level of interest: An article whose findings are important to those with closely related research interests

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