Reviewer's report

Title: Exon deletions and intragenic insertions as a frequent cause for ataxia oculomotor-apraxia 2

Version: 1 Date: 9 June 2009

Reviewer: Michel MK Koenig

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The manuscript of Bernard et al. entitled « Exon deletions and intragenic insertions as a frequent cause for ataxia oculomotor-apraxia 2 » reports the identification of 4 AOA2 cases with large rearrangement mutations, including 3 compound heterozygous rearrangements and one homozygous case. This is an interesting observation, since compound heterozygous rearrangements are only detected by copy number analysis and are frequently overlooked. The authors report a high fraction of rearrangement mutations among their AOA2 cases, albeit this could be partly biased by the small number of cases.

Minor revisions
End of background section:
«four cases with large gene rearrangements within SETX are described for patients with AOA2. »
Add the two families reported by Tazir et al (Journal of the Neurological Sciences, 2009, 278 :77-81) : a deletion of exon 17 and 18 and a deletion of exon 5

End of background section:
« … we identified compound heterozygous deletions and one insertion … »
Add « compound » since the deletion and insertion mutations were compound heterozygous with a point mutation (this is to avoid confusion with dominant heterozygous mutations).

The authors should show the haplotype results of patients P3 and P4. Possibly only a few markers close to the SETX gene share a common allele, indicating an ancient founder effect. Were the two patients, P3 and P4, originating from a small region (town ?) of Germany ?

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