Reviewer's report

**Title:** Retinal nerve fibre layer loss in hereditary spastic paraplegias is restricted to complex phenotypes

**Version:** 1  **Date:** 6 June 2012

**Reviewer:** Bart P.C van de Warrenburg

**Reviewer's report:**

I have seen this paper by Wiethoff et al., who have studied retinal nerve fibre layer loss in a cohort of HSP patients. The study is to be regarded as observational, but does contain some interesting data that are relevant for further studies in this field.

My comments are minor, but need to be addressed in a revised discussion (and perhaps intro).

Minor essential revisions:

The rationale behind the study slightly odd. The fact that some other groups have suggested that RNFL might a unspecific marker of neurodegenerative disease does not mean that the authors of this paper should simply take over this claim because it is not biologically plausible. I think doing OCT studies in an HSP cohort is already sufficient justification, as it is on of the first in the field. The current main message that RNLF loss is not a universal trait for all neurodegenerative disease is of course an obvious one.

A limitation of the study is the fact that the HSP cohort is quite heterogeneous and that not all patients are genotyped. This prevents drawing some type-specific changes, as the authors state. At present, OCT has no place in the work-up of HSP patients as there are other (mainly) clinical features that are more indicative of a certain genotype than OCT. I would appreciate if the authors discuss this in slightly more detail.

Lastly, the authors mention OCT as a biomarker tool, but this is a cross-sectional study and the authors did not find any correlation with clinical parameters, so this should be left out.

Please put a hyphen in moleculargenetic

**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'