Reviewer's report

Title: LOXL1 gene variants and their association with pseudoexfoliation glaucoma (XFG) in Spanish patients

Version: 1  Date: 11 May 2015

Reviewer: Juan Carlos Zenteno

Reviewer's report:

Major compulsory revisions

The manuscript needs to be shortened. I suggest to substantially shorten molecular methods (next generation sequencing and PCR-RFLP genotyping) section and to include such information as supplementary material.

Results obtained in this study on the recently described rs41435250 risk SNP and a brief Discussion on such results would be of interest for readers.

A sentence indicating if the geographic origin of cases and controls is similar needs to be added in Material and Methods section.

Introduction, page 4, line 15, "The former study suggested the possibility of a LOXL1 intragenic epistatic effect..", must be changed to "The latter study.."

Were controls checked for the absence of exfoliation material? This should be stated in Methods section.

Discussion, page 14, line 35, the authors stated that "... 75% and 66% of XFG and control participants (originates) from the Northwest regions of spain, where the prevalence of XFG is higher than in other regions of Spain. Differences between Spanish regions could explain the discrepancies between our results and those reported recently in different Spanish populations". It is not clear why differences in XFG prevalence among Spain regions could explain conflicting results as the lack of relationship between XFG and the G allele of rs1048661 in a previous Spanish population (de Juan-Marcos et al. 2014). Please explain more in detail.

A brief comment on the possibility that the use of CEU population controls for excluding novel LOXL1 SNPs as risk variants (Suppl table 1) could lead to false negative results, should be added.

Minor revisions

Please correct spelling mistakes through the manuscript.

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:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests