Reviewer's report

Title: Suggestive linkage detected for blood pressure related traits on 2q and 22q in the population on the Samoan islands

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Reviewer: Norihiro Kato

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Åberg et al. performed genome-wide variance component linkage analyses to search for loci influencing five blood pressure related traits. They found suggestive evidence of linkage on 2q and 22q, which appeared to overlap with the results reported by the previous studies in European-descent populations.

The findings themselves seem to be encouraging with consideration of the inherent difficulties in blood pressure (or hypertension) genetics. The reviewer would like to make several suggestions as below.

Minor Essential Revisions
1. The relevant information may have been described in the previous reports but it would be helpful to show the relationship between blood pressure (and hypertension prevalence) and participants’ age, i.e., how ageing influences the blood pressure increase or prevalence of hypertension, in the tested population.
2. Since the sample size per pedigree spans from 2 to 246, it may be possible to evaluate whether predisposition to hypertension is rather prominent in some (large) pedigrees with more affected individuals. The reviewer would recommend the authors to perform the test of linkage among such large families, which may enhance the power of linkage to some peaks and may increase the LOD scores accordingly.

Discretionary Revisions
1. Because hypertension is a late-onset disease, it would be helpful to know the results for testing linkage of hypertension when the participants are restricted to middle-aged and older people, e.g., >40 years.
2. The heritability seems to be modest as compared with the figures reported in other populations. Please describe whether this is specific to blood pressure phenotypes or also applicable for other metabolic traits such as lipid in the tested population.

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.