Reviewer's report

**Title:** A tagging SNP in INSIG2 is associated with obesity-related phenotypes among Samoans

**Version:** 1  **Date:** 13 May 2009

**Reviewer:** Christian Dina

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This study by Deka et al. investigates association with obesity for SNPs in INSIG gene in a Samoan population. The findings are not really significant but the others claim that it is at least marginally significant. This concise article does not, in its present form, add much to the question of whether INSIG2 region is associated with obesity or not and the results should be presented in perspective with previous results both in European and Asian samples.

**Major Revision**

What is the difference between LD in Samoans and Europeans. Does it explain why another SNP than the initial one would be found (marginally) associated in obesity.

The article would gain in interest if the results of present study were compared with results in other Asian populations.

The result is less conclusive than what is stated. A p of 0.009 just means that we need more samples. The authors should change a little bit their conclusion.

The association was found under recessive model only, even in the original study. Therefore, this genetic model (instead of or along with the additive) should be explored and presented.

**Minor**

I do not understand the permutation procedure : is it SNPs specific or does it apply to the 5 tests simultaneously. If the last is true, why using Bonferroni?

It is not clear why presenting separate results for males and females for INSIG 2 gene. A quick review of the literature does not point out any differential effect.

Please display the p-value, OR and confidence interval of the SNPs presented as significant in the main test. It is a bit difficult switch text/table when we read the main text.

**Level of interest:** An article of limited interest
Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.