Reviewer's report

Title: Association between a rare SNP in the second intron of human Agouti related protein gene and increased BMI

Version: 3 Date: 17 March 2009

Reviewer: Inga Prokopenko

Reviewer's report:

Revisited manuscript from I. Kapa et al., describing the association with increased BMI and a rare variant rs11575892 in the second intron of AGRP gene observed in a sample of 698 elderly Latvians, has some of the reviewers suggestions incorporated; still in some parts it needs attention and consideration.

Major Compulsory Revisions

As it has been noted by more than one reviewer, additional genotyping of at least one SNP detected by resequencing would be desirable in the studied sample.

Replication genotyping of the rare detected variant rs11575892 in additional sample still should be considered.

Table 1: under “Values” header reader can find summary statistics of different kind. This column is unclear, needs to be completed.

Table 2 still remains difficult for understanding. This table needs more work and has to be self explanatory. It’s not a good practice to present means and standard errors from one statistical test and p-values from another. Statistical tests can be stated in the header. Legend of this table is too long, which makes the table unreadable. Genotype counts are needed in this table.

The genotyped counts should be stated in at least one of the tables.

Answer to the reviewer 2, comment 7, seems to be unsatisfactory, since the unnecessary speculation still remains.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests