Reviewer's report

Title: Common variants in the lipoprotein lipase (LPL) gene and type III hyperlipidemia.

Version: 1 Date: 12 March 2007

Reviewer: Jaroslav Hubacek

Reviewer's report:

General
Interesting manuscript dealing with the many years unresolved question - what are, next to the APOE genotype, the other next genetic/environmental factors leading to the development or rare hyperlipidaemia type III

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1/ As authors mentioned, they have previously published, that APOA5 variant could be a second cofactor leading to HLIII. Thus it will be interresting to divide the patients into two groups, carriers of the common APOA5 genotype and others. Effect of LPL variants could be expressed in "common APOA5 alleles" carriers, but not in the second group.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1/ It will be interresting to add a table with basic characteristics of the analysed individuals

2/ Analysis of LPL haplotypes should be included

3/ Not only common apo e2 allele homozygosity, but in some cases also rare APOE mutations are connected with HLIII. This should be mentioned in introduction.

4/ More detailed description of patient selection (lipid values criteria) should be included.

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Discretionary Revisions (which the author can choose to ignore)

1/ It will be of potential interres to know, how many APOE22 homozygotes were excluded from the dyslipidemic patients group.

2/ Why only carriers of the APOE22 genotype were included? It will be more likely to detect new genetic risk factors in individuals with some other rare mutations, or in APOE32 heterozygotes.

3/ I presume, that there were no relatives within the analysed groups.

4/ I will rec commend to use p values like = or <, not both

5/ Title should in some way reflect the fact, that there was detected no association between LPL variants and HLIII

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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