Author's response to reviews

Title: Studies of association of AGPAT6 variants with type 2 diabetes and related metabolic phenotypes in 12,068 Danes

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Dear Editor,

Please consider the enclosed manuscript entitled “Studies of association of AGPAT6 variants with type 2 diabetes and related metabolic phenotypes in 12,068 Danes” for publication in BMC Medical Genetics.

AGPAT6 encodes the most recently identified glycerol-3 phosphate acyltransferase, GPAT4, which catalyzes the first step in the de novo triglyceride synthesis. As studies of agpat6-deficient mice have shown lower weight and resistance to diet- and genetically induced obesity, we hypothesized that common variation in AGPAT6 could contribute to an increased risk of type 2 diabetes, or influence metabolic traits related to ectopic lipid deposition in obesity and type 2 diabetes.

Our analysis showed that none of the eleven AGPAT6 alleles investigated were associated with type 2 diabetes in a large Danish cohort, and there was no evidence of association with obesity, serum lipid concentrations or surrogate markers of insulin sensitivity or secretion.

Taken together, these results provide evidence that common or low frequency variation in proximity to AGPAT6 is not increasing susceptibility to type 2 diabetes, obesity or metabolic traits related to ectopic lipid deposition.

We therefore feel that these findings are of general interest to scientists and physicians working in the field of lipids, insulin resistance and diabetes, and hope that the paper is suitable for publication in the BMC Medical Genetics.

The results reported in this is manuscript has not been published or is under consideration for publication elsewhere.

Yours sincerely

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