Reviewer's report

Title: Genomic Screen for Loci Associated with tobacco usage in Mission Indians

Version: 1 Date: 5 August 2005

Reviewer: Ming D. Li

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General

The ms authored by Ehlers and Wilhelmsen reports their genomic scan for tobacco usage in Mission Indians. Two smoking related phenotypes were analyzed in their study: regular tobacco usage (smoked daily for one month or more) and persistent tobacco usage (smoked at least 10 cigarettes a day for more than one year). Based on the results from variance component analysis on 243 subjects, they identified two regions on chromosomes 6 and 8 with a LOD score of 2.0 and 6 regions with a LOD score from 1.3-1.5. Additionally, the authors analyzed heritability of tobacco usage for the American Indian population.

Overall, the paper is well-written and easy to follow. In terms of ethnic population analyzed in this study, this report is kind of new. However, from scientific point of view, this report does not really contribute too much to the field regarding region/gene hunting for tobacco dependence. None of the regions identified in the study reaches a suggestive linkage based on the criteria used in the human genetics literature. Sample size seems too small to detect any significant linkage for the trait of interest here. Although both phenotypes have been used in the literature, it seems that these two phenotypes are not ideal ones for studying tobacco dependence because they vary greatly among smokers.

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

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

Discretionary Revisions (which the author can choose to ignore)

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

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No