

ARIC MANUSCRIPT PROPOSAL FORM

Manuscript #601 (601 was resubmitted to accommodate adding #600)

1. Full Title: Genetic polymorphisms and coronary heart disease (CHD) susceptibility given exposure to cigarette smoking

Abbreviated Title (length 26): Gene-SMK Interaction on CHD

2. Writing Group (list individual with lead responsibility first):

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3. Timeline:

Analyses will be completed two months after approval of the Publications Committee and completion of genotyping. A draft manuscript will be drafted within 4 months after the completion of the analysis.

4. Rationale:

Smoking is strongly associated with atherosclerosis and cardiovascular disease. Similar genetic polymorphisms of GSTs and susceptibility to atherosclerosis given exposure to carcinogens in cigarette smoke have been studied in animal models and tissue or cell cultures in vitro. To our knowledge, no study has addressed genetic susceptibilities to CHD given exposure to cigarette smoking in a population-based sample.

The proposed case-cohort study will explore the interaction between cigarette smoking and metabolic polymorphisms in the development of CHD in ARIC cohort. The specific aims of the study are: (a) to test the hypothesis that susceptibility to CHD is influenced by the presence or absence of GSTM1 and GSTT1 genotypes coding for metabolizing enzymes, given exposure to cigarette smoking and (b) to determine the frequencies of homozygous deleted genotype of glutathione S-transferase M1 (GSTM1 0/0) and glutathione S-transferase T1 (GSTT1 0/0) in the ARIC cohort, a community-based biracial population.

5. Addresses of Working Group Members:

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