Title: Relation of Diet to Heart Disease Risk Factors in Children.

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Principal Investigator: Ronald Krauss, MD

Synopsis:
Metabolites of dietary phosphatidylcholine- choline and trimethylamine N-oxide (TMAO)- were recently identified as being associated with myocardial infarction in a case-control study. The latter TMAO is a gut-microflora-derived choline metabolite that has been shown to be a potent risk factor for cardiovascular disease (CVD).

This pilot study seeks to use information derived from a dietary questionnaire in children to test the association of dietary choline intake to plasma levels of TMAO as well as the relationship between plasma choline levels and components of atherogenic dyslipidemia (increased triglycerides and small LDL, and reduced HDL cholesterol). An ancillary goal of this study is to build on existing programs of community outreach to local Oakland/Berkeley minority communities, and to develop an infrastructure for family-based and community participation in clinical research across the full age spectrum and among diverse populations.

This pilot study will examine the association of dietary choline intake assessed by food frequency questionnaires to biomarkers of CVD risk in 40 children (> 7 years of age) and their parents as there is no information regarding this relationship in children. Ultimately, better understanding of the relationship between dietary choline intake and CVD risk factors may facilitate the formulation of more specific dietary choline recommendations in children and adults.