Reviewer’s report

Title: Shared Ancestral Susceptibility to Colorectal Cancer and other Nutrition Related Diseases

Version: 2 Date: 20 May 2012

Reviewer: Luis Carvajal Carmona

Reviewer’s report:

• Major Compulsory Revisions

This paper tests an interesting hypothesis that attempts to link nutrition-trait related variation and colorectal cancer (CRC) risk. This is similar to the thrifty genotype hypothesis that proposed that thrifty genes conferred in the past a selective advantage in hunter-gatherer populations but that increased the risk to diabetes and metabolic syndrome on modern populations with a western lifestyle. I found the paper well-written and would only suggest to the author to describe in more detail the SNP selection. Were these SNPs identified through genome-wide association studies? What was the criteria to accept that one SNP was associated with a nutrition-related trait?. I would also suggest the authors to investigate if the loci showing suggestive evidence of association have been identified by recent genome-wide scans of selection using the hapmap and 1000 genomes data. Finally, given the fact that none of the markers replicated in the German sample, I will suggest the authors to tone down their conclusions about the association with CRC and the possible population-specific gene-environment interaction in the Czech population.

• Minor Essential Revisions

A recent paper worked along similar lines (http://www.ncbi.nlm.nih.gov/pubmed/22511877) and I would suggest to the authors to read it and consider discussed in the paper

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.