Reviewer's report

**Title:** The INSIG2 rs7566605 polymorphism is not associated with body mass index and breast cancer risk

**Version:** 1  **Date:** 17 March 2010

**Reviewer:** Tanya Agurs-Collins

**Reviewer's report:**

Minor Compulsory Revisions

The single nucleotide polymorphism (SNP) rs7566605, located in the promoter of the INSIG2 gene has been associated with high body mass index (BMI) in European and African American samples living in the US or Western European countries. However, several studies did not find an association. Since the literature is mixed as it relates to the association with SNP rs7566605 and BMI, the study plans to build on current research with an attempt to replicate the findings in a different population. The research question posed is well defined. This study examined the association between the SNP rs7566605 in the INSIG2 gene with BMI and risk for breast cancer in a large study of 3,973 women nested within the European Prospective Investigation into Cancer and Nutrition (EPIC) study. The title and abstract accurately convey the research findings. The methods used are approproaiate and well described. The study did not observe a statistically significant association between rs7566605 and BMI. Nor did the study identify a statistically significant association with INSIG2 and breast cancer risk. The authors adhered to the relevant standards for reporting and data deposition. However, study limitations were not discussed. Also not discussed is a possible alternative for the lack of an association and how the finding contrast or are in agreement with previous research. One such possibility for a lack of association could be the role of gene-environment interactions. The overall writing is clear and the data is sound. Although this study failed to reveal any replication of the SNP rs7566605 with BMI and breast cancer risk, the findings contribute significantly to the scientific literature.

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

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:

I declare that I have no competing interests.