Reviewer's report

Title: The Estrogen Receptor 1 locus associated with migraine susceptibility is restricted to the 3' end of the gene

Version: 2 Date: 24 November 2005

Reviewer: Maria Del Zompo

Reviewer's report:

General
The authors have previously reported an association between the estrogen receptor 1 (ESR1) gene exon 8 G594A polymorphism (SNP rs2228480) and migraine susceptibility in two independent Australian cohorts. This SNP is synonymous with no associated amino acid change, consequently it is unlikely that this polymorphism is causative, but may be in linkage disequilibrium (LD) with an unknown causative variant. In this paper the authors report results of the analysis of two further SNPs in the ESR1 gene in the same study group, rs8179176 in intron 1 and ss12568596 in exon 4. The results showed no evidence for association of the polymorphisms and migraine susceptibility and no evidence for LD between these two SNPs and the previously implicated exon 8 SNP. They conclude that the previously reported migraine susceptibility locus appears to be restricted to the 3’ region of ESR1 with no association to markers located toward the 5’ end of the gene.

The question posed by the authors is well defined.
The methods are appropriately and thoroughly described, allowing other researcher to replicate the work.
The discussion and conclusions are adequately supported by the data.

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)

I suggest the authors to simplify Tables 1 and 2 and explain what the “Both” group represents.

Discretionary Revisions (which the author can choose to ignore)

What next?: Accept after minor essential revisions

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

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:
I declare that I have no competing interests.