Reviewer's report

Title: Meta-analysis on the effect of the N363S polymorphism of the glucocorticoid receptor gene (GRL) on human obesity

Version: 1 Date: 6 March 2006

Reviewer: Richard Myers

Reviewer's report:

General

This article examines the association of the N363S polymorphism in the GRL gene to obesity in a meta-analysis, including previously unpublished data from the authors. Nevertheless, the N363S polymorphism is rare, and although it changes the amino acid sequence, there is meager evidence for the functional significance of this amino acid change. Thus, while the study does not rule out a possible effect of other variants for GRL, it does make a strong case that this polymorphism is not a significant player. Because no other common amino acid sequence alteration is known for GRL, this variant might be reasonably expected to show an effect if one exists.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

None

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

The GRL gene is also referred to as NR3C1 (nuclear receptor subfamily 3, group C, member 1) by the HUGO Gene Nomenclature Committee, and reference to this name should be made in the text, together with the chromosomal position of the gene on 5q31.3

There has been some work to understand the functional significance of the N363S polymorphism, and it is important to summarize what is known of the functional significance of this variant.

The authors mention other polymorphisms that have been studied for GRL, but do not adequately explain why they did not study these for this investigation. By what rationale did they choose to limit their study?

Discretionary Revisions (which the author can choose to ignore)

None

What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field
Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests.