Reviewer's report

Title: HLA-DQA is associated with abdominal aortic aneurysms in the Belgian population: a case control study

Version: 1 Date: 10 June 2006

Reviewer: Janet T Powell

Reviewer's report:

General
The principal merits of publishing this large body of work is to prevent others from undertaking similarly futile studies. The results should be presented, but the conclusions sharply moderated.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
1 Provide a power calculation for numbers of patients and controls needed to detect a 10% (or 7.5%) change in allele frequency for HLA-DQA1*0102 and consider the results in the light of this power calculation.
2 This reviewer concludes that there is little evidence to support association between the HLA loci studied and AAA, but in Belgian males there is weak evidence that the HLA-DQA1 locus harbors a risk factor for AAA-associated conditions (and this may be hypertension, coronary heart disease etc). Why this should be so in Belgium but not in Canada is far from clear.
3 The confounders for the study, such as presence of hypertension etc deserve to be amplified. After all several lines are used for the validity of spouse controls, when this would lead to a control group biased for female gender. The possible inappropriateness of the control group could lead to false conclusions.

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

Discretionary Revisions (which the author can choose to ignore)

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory 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.