Reviewer’s report

Title: Genetic mapping of a new heart rate QTL on spontaneously hypertensive rats chromosome 8

Version: 1 Date: 30 October 2006

Reviewer: Morton Printz

Reviewer’s report:

General

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

1. Did you do a permutation analysis - at least 10,000 - to insure a unique QTL?

2. It would be useful to have information on the normalcy of the distribution and other pertinent information on the distribution of results. Were any outliers discarded?

3. The finding is of a locus which dictates a decrease in heart rate while much of the manuscript implies that the goal and subsequent finding was to explain the increased heart rate associated with hypertension in the SHR. The MS should be redone making sure that the reader understands that a negative HR allele was apparently uncovered.

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

1. On Pages 12 and 13, the discussion on possible candidate genes is excessive and speculative. I would recommend deletion of paragraphs 2 and 3 on P 12 as well as paragraph 1 on P 13 dealing with HTR3.

2. The text needs a fair amount of editing -- see comments below for some of the suggested changes.

1. Title - Spontaneously
2. P 3 Using an F2 intercross .... (SHR) and Brown Norway (BN),
3. P 4 ..hypertension. A total genome scan ... (QTL) provides a powerful ...
4. P 4 Even though .... have been identified,
5. P 4 identification of the genes related to complex traits suc as incraaed heart rate associated with hypertension.
6. P 5 in male 12 - 14 weel old animals.
7. Please chack if APO2 or APO02 is correct.
8. P 10 .. an increase in heart rate values ...
9. P 10 .. mapping method takes into account...
10. P 11 It is incorrect to say that you found a QTL on chromosome 8 associated with tachycardia (misspelled) in hypertensive animals. In fact, you may have identified a locus associated with a negative effect on heart rate in the SHR.

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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 of importance in its field

Quality of written English: Not suitable for publication unless extensively edited
Statistical review: Yes

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