Reviewer's report

Title: Gene by Environment QTL mapping through Multiple Trait Analyses in Blood Pressure Salt-Sensitivity: identification of a novel QTL in rat chromosome 5

Version: 4 Date: 3 March 2006

Reviewer: M H Steinberg

Reviewer's report:

Let me first say that quantitative genetics and hypertension are not my areas of expertise. I have read the paper, the revisions and the author and referee comments.

I agree with the criticism that the total number of rats and markers studied was very small so that the problem would be false negative rather than false positive findings. That being said, it is unclear to me why the authors ignore other LOD scores that meet their criteria for association on other chromosome.

The issue of blood pressure measurement methods does not seem to me to be a major one. Why would telemetry be superior to catheters which I thought were a "gold standard" to which telemetry is compared? A recent review of this subject convinces me that their methods for BP were fine.

Recommendations for Blood Pressure Measurement in Humans and Experimental Animals

Part 2: Blood Pressure Measurement in Experimental Animals: A Statement for Professionals From the Subcommittee of Professional and Public Education of the American Heart Association Council on High Blood Pressure Research

Theodore W. Kurtz, MD; Karen A. Griffin, MD; Anil K. Bidani, MD; Robin L. Davisson, PhD; John E. Hall, PhD

Abstract

In experimental animals, as in humans, techniques for measuring blood pressure (BP) have improved considerably over the past decade. In this document, we present recommendations for measuring BP in experimental animals with the goal of helping investigators select optimal methods for BP monitoring in the research laboratory. The advantages and disadvantages of various BP measurement methods are discussed and specific recommendations are provided for selecting the optimal technique depending on the study objective. Although indirect techniques that permit only sporadic measurements of BP may be suitable for some purposes, methods for directly measuring BP are generally preferred because of their ability to monitor the highly dynamic nature of BP in a comprehensive fashion. Selection of the methods to be used should ultimately be guided by the study objectives to insure that the techniques chosen are appropriate for the experimental questions being explored.

Quality of written English: Poor. Needs editorial correction

Competing interests: I have no conflicts of interest.