Reviewer’s report

Title: Longitudinal Ambulatory Measurements of Gait Abnormality in Dystrophin-Deficient Dogs

Version: 1 Date: 14 January 2011

Reviewer: Jose-Luis Rivero

Reviewer’s report:

This paper compares the time course of gait features between GRMD dogs and control healthy dogs from the age of 2 to 9 months, by using accelerometers devices. Data are analyzed by uni- and multivariate statistical methods, and results reported clearly show significant gait abnormalities in GRMD dogs, which are well correlated with clinical presentations of the disease. The practical implication of the study is very clear (although not sufficiently remarked into the manuscript), since the methodology described provides new insights to objectively monitor gait features in these patients.

While the objective of the study is very clear, and there is sufficient, new (original), and important information, this reviewer find that some sections of the manuscript (particularly Results and much more the Discussion), although the writing is clear and readable, should be considerable condensed and re-write in a much more concise manner.

The title represents clearly and accurately the article’s content. The abstract is also clear and concise, and the Introduction focused on relevant aspects of the topic and not just a literature review. Also, experimental methods are described in sufficient detail and statistical methods are valid. However, I am not sure if the study design and methods for selecting test and control subjects are absolutely appropriate. The study compared animals with different speeds and gaits in control and affected animals. The authors have discussed extensively these limitations, but this reviewer has not sufficiently clear these important aspects of the study. Should be clarified.

Data are presented in a clear and understandable manner and tables and figures are clear and necessary; data also have been analyzed appropriately. I find, however, that not all information included in the results sections is relevant and important, and perhaps it should be shortened or condensed.

My major remark and concern is related with the great extension of the Discussion section. To my view, the authors have not provide a balanced view of the importance of the results, and all of this section (Discussion) might well be no relevant. In consequence, this particular section should be abstracted and condensed in about a 50% of the current length. Also, the main conclusion of the study, as well as their relevant practical implications, should be emphasized in a more convincingly manner.
As a discretionary revision I suggest to delete the 2 supplementary files provided. I find that they are not necessary for the scientific value of the study.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

'I declare that I have no competing interests’