Reviewer’s report

Title: Role of 1,5-anhydro-D-fructose in C57BL/6J mice challenged with high-fat diet

Version: 1 Date: 30 July 2010

Reviewer: Nieves Gonzalez

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Mayor Compulsory Revisions

By the present work, the authors meat to test the long-term effect of AF on insulin secretion and glucose tolerance, and also the possible responsibility of GLP-1 on the processes. For that, they used an obesity model generated in mice by a high-fat feeding. Although the methods are well described, the authors claimed that their negative results are possibly due to the low dose of AF administered; if they think so, why higher doses of the AF were not tested?

The protocol used does not meet the porpoise rise by the authors at the end of the Introduction section; why they did not measure plasma GLP-1 levels?. No justification for performing the study in an obesity model is provided in the Introduction section.

The Discussion is very poor (i.e. 3 out of 4 references are related with the already known fact that high-fat diet induces metabolic alterations in C57BL/6J mice). The conclusions are based on a hypothesis not demonstrated by the data.

In general terms, the data does not provide further relevant information to be added to that already reported by part of the authors in a previous publication (Ahrén B, Holst JJ, Yu S: Eur J Pharmacol 2000, 397:219-225).

Minor Essential Revisions

• Statistics on insulin data (Table 1) should be revised (Normal diet value of 129±26 versus High-fat diet 211±22, n=12, p<0.05, by Student t test, RSigma).

• Statistics section, Table 1 and Figures Legends: it is confusing the way results are been expressed (mean±SEM or mean±SE?)

• Discussion Section, lines 9 and 12: reference 11 should be 10 (Ahrén B, Holst JJ, Yu S: Eur J Pharmacol 2000, 397:219-225), which is their previous study.

Level of interest: An article of insufficient interest to warrant publication in a scientific/medical journal

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:

'I declare that I have no competing interests' below.