Reviewer's report

Title: Influence of antioxidant (L- ascorbic acid) on tolbutamide induced hypoglycaemia/antihyperglycaemia in normal and diabetic rats

Version: 1 Date: 20 July 2004

Reviewer: Venugopal Padmanabhan Menon

Reviewer's report:

General
This paper addresses the additive effects of ascorbic acid on tolbutamide treatment in normal and diabetic rats. They have found that supplementation of ascorbic acid along with tolbutamide enhances the therapeutic efficacy of tolbutamide. Though both ascorbic acid and tolbutamide are known to be good agents against hyperglycaemia, their combined effects has not yet been tested and hence the contribution is new in this aspect.

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

In this study authors have used Albino rats of either sex and there are lot of possibilities for sex related differences to occur in response to diabetes induction and subsequent treatment, due to hormonal influences. Authors should explain why they used animals of different sexes and not the same. What were the variations observed.

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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)

In introduction, authors have discussed about survey, which seems out of place and in introduction second para, line 6, starting with 'Earlier reports .' is unclear and has to be modified.

The dose fixation for ascorbic acid is not clear. Authors have given 40mg/kg b.wt for normal rats. They should rationalize why same 40mg/kg b.wt was not given to normal rats. The last line 'L-ascorbic acid dose .' in the 'induction of diabetes' is not explanatory.

Authors have given the mode of alloxan administration again in discussion, which can be deleted and mode of administration of ascorbic acid and tolbutamide should be included in 'materials and methods' rather than in 'discussion'.

It would be better if the discussion is elaborated with more mechanistic explanations

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Discretionary Revisions (which the author can choose to ignore)