Reviewer's report

**Title:** Anti-diabetic effect of a preparation of vitamins, minerals and trace elements in diabetic rats: a gender difference

**Version:** 1  **Date:** 12 June 2014

**Reviewer:** Zoltan Ungvari

**Reviewer's report:**

The present study by Sarkozy and colleagues investigated the possible anti-diabetic effect of a preparation of several vitamins and minerals in a chronic diabetes model induced by neonatal STZ treatment and looked at sex differences. The authors found that the multivitamin/mineral preparation significantly attenuated the progression of diabetes in male rats, while in females diabetes progression was less severe and the multivitamin/mineral treatment remained ineffective. The manuscript is clearly written and the results are properly discussed. There are limitations of the study, which are properly acknowledged. Although multivitamins are consumed a lot by diabetics, very few efficacy studies are available with such preparations. Therefore, this paper has translational relevance and may be interesting for the specialist and also for the general readership.

Minor essential reviews.

In contrast to the methods and results, the authors claim in the abstract that insulin and HbA1c were also measured at week 4, and 8. Please show the data or correct the abstract.

Discretionary revision

The authors acknowledge the major limitation of the study, the lack of mechanistic experiments. The authors may want to consider discussing the possible effect of vitamins/minerals on beta-cell regeneration and related gender differences.

The authors may want to discuss in more detail the limitations of the type 1 diabetes model used.

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

**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