Reviewer's report

**Title:** Efficacy of Alogliptin in Type 2 Diabetes Treatment: A Meta-analysis on Randomized Double Blind Controlled Studies

**Version:** 1  **Date:** 11 November 2012

**Reviewer:** Abd Tahrani

**Reviewer's report:**

**Major comments**

I am slightly worried about the excessive heterogeneity in the analysis. This will really affect the conclusion. Can the authors present the results in subgroups or do sensitivity analysis to see if the heterogeneity can be improved.

Do the authors think that taking only paper that had insulin treatment might improve the validity of the findings? What about analysing results by the country of the research? As different ethnicities included, several factors would be different between these cohorts such as age and obesity, this needs to be taken into account.

Did the authors use fixed or random effects? In the methods section they mention two contradicting things.

**Minor comments**

Introduction: Avoid “diabetics” and use “patients with diabetes”

“Additionally, type 2 diabetic patients secret smaller amount of incretin hormones”; not quite accurate. The data about GIP (which is also an incretin) suggest GIP resistance rather than GIP deficiency.

GIP has many other actions on adipocytes as well.

You don’t need to use “dipeptidyl peptidase – 4” every time after you have defined it for the first time.

“Drug therapy for type 2 diabetes usually started with single oral antidiabetic drug followed by dose escalation to maximal tolerable dose, then addition of other oral antidiabetic drug; but later as the disease progress, patients require insulin therapy”; not entirely true. Many clinicians and invetigators believe in early insulin therapy.

“they are not among the widely used antidiabetic drugs”; I think this might be country-dependant. Certainly in some countries the use of incretin-based therapy is very high.

For heterogeneity, may experts suggest a $p < 0.1$ rather than $p < 0.05$

Page 8, do u mean mg/dl?

Report p value as $< 0.001$ or $< 0.0001$ rather than $p=0.0000$

Remove the first sentence of the discussion.
**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

'I declare that I have no competing interests'