Reviewer’s report

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

Version: 2 Date: 16 December 2012

Reviewer: Apostolos Tsapas

Reviewer’s report:

Major compulsory

1. Results, paragraphs 3 and 4: were subgroup analyses, sensitivity analyses, meta-regression etc predefined, or were they decided post-hoc? How did the authors correct for all these exploratory analyses? Mentioned in initial comments as well.

2. Page 7, paragraph 3: Please explain rule utilised to assess OVERALL risk of bias when applying Cochrane risk of bias tool (which were your predefined key domains?? When was overall risk of bias deemed low, when unclear and when high?).

3. Page 8, paragraph 1: "...In subgroup analysis, use of both doses of alogliptin as add-on or alone (alogliptin alone vs alogliptin plus other antidiabetic drug) and patients difference in experience to antidiabetic drug (antidiabetic drug naïve vs antidiabetic drug experienced) did not explain the observed heterogeneity. ..." Please rephrase - not clear what you mean. How did you check that? What do you mean with experience?

4. Page 8, paragraph 1: "... But subgroup analysis depending on study location (study in a single country vs study in multiple countries) showed significant reduction in HbA1c in single country studies than studies in multiple countries. ...". If you want to check for effect of study location why are you comparing single site vs multi-centre studies? This is not the same question.

5. Page 9, paragraph 2: the results of meta-regression analysis should be analysed more in the discussion. What is the potential clinical relevance of this finding? Could alogliptin be not-useful if used for > 12 weeks (the real clinical life...)? What is the implication of your finding for clinical life and for research?

6. Discussion: In initial comments the authors were asked to comment on the following point: What is the clinical relevance of outcomes assessed? Please comment. Why use both HbA1c and FBG? CVD mortality is more patient important. Did the authors extract data for it? If not, why?".

Minor essentials

7. Page 7, paragraph 2, line 5: change ".intervals (95% CI) for mean the change
in HbA1c, FPG and ..." to "..intervals (95% CI) for the mean change in HbA1c, FPG and..."

8. Page 7, paragraph 2, line 7: change "... for achieving HgA1c # 7%, reduction HgA1c by #..." to "... for achieving HbA1c # 7%, reduction HbA1c by #..."

Page 7, paragraph 3, line 7: change "...(leaving one study out at a time analysis)..." to "...(leaving one study out at a time)..."


Discretionary revisions

11. It would be helpful if the authors could list the details of the search strategy (syntax etc) in an appendix.

**Level of interest:** An article of limited interest

**Quality of written English:** Needs some language corrections before being published

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

**Declaration of competing interests:**

In the past my university has received research support from Novo Nordisk and Novartis.