Reviewer’s report

Title: Renal function during long-term lithium treatment: a cross-sectional and longitudinal study.

Version: 1 Date: 27 October 2014

Reviewer: Matthew D Jose

Reviewer’s report:

Bochetta et al present an update on their work on the effect of long-term Lithium use of eGFR. They acknowledge their previous work / publications in the field and this present manuscript adds significantly to this.

The manuscript as presented is a simple message - long term lithium use is associated with reduction in eGFR. The research question, methods and discussion are all appropriate. However I think it would be helpful to the reader if:

1. A table of demographic and co-morbidity information on the 953 patients were provided - diabetes, smoking, hypertension, obesity and anything else that might influence long-term decline in eGFR. This doesn't appear to have been taken into account in the multivariate model.

2. Therefore the actual statistical modelling should spell out exactly what was considered in the multivariate model

3. Have the authors considered the effect of lithium concentration as a continuous variable - i.e.: is the effect on eGFR dependant on the overall serum concentration, irrespective of whether it is in the therapeutic range for a mood stabilising effect. This question is out of scope of the current research question however, but I suspect the research team have the data available.

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.