Reviewer's report

Title: Is the staple diet eaten in Medawachchiya, Sri Lanka, a predisposing factor in the development of chronic kidney disease of unknown etiology? - An experience from urinary beta two microglobulin measurement

Version: 1 Date: 25 March 2014

Reviewer: Keith Levine

Reviewer’s report:

The authors are to be commended for their work in bringing greater attention to an emerging public health crisis in Sri Lanka. Because many of previously hypothesized risk factors involve oral exposure to one or more environmental nephrotoxins, a greater understanding of dietary considerations within the endemic area is of interest to the scientific community. It is recommended that this manuscript be accepted for publication. In order to further strengthen the manuscript, it is recommended that the authors expand on the following comments where appropriate. Several minor editorial comments are also provided for consideration.

Discretionary Revisions:

1 – Recommend significantly expanding introduction (if not word limited) to include a more extensive discussion on the CKDu epidemic in Sri Lanka and provide relevant supporting references. For example, is the issue predominantly impacting a certain geographic region on the country, people of a certain occupation or socioeconomic status, and so on? This information would help put the study findings in context.

2 – In the materials and methods section, a discussion of the 30 CKDu patients identified for the study is provided. Is additional, specific information available on the biochemical measurement levels for these cases and age sex matched controls? What was the threshold for inclusion or exclusion?

3 – What were the biochemical metric thresholds for different stages of CKDu?

4 – Are some of the cases and controls the same for the urinary study and the dietary study, or are these different groups entirely?

5 – In addition, are some of the cases and controls from the same family or residence?

6 – How were the GFR data presented in Table 2 collected? Were these data collected as part of this investigation, or were they provided by medical professionals at the onset of the study?

7 – Is the diet of the Medawachchiya region typical of the Sri Lankan diet? From the discussion, it seems that most of the food consumed in this region is
harvested locally from home plots. Are foods from the region exported to other parts of the country?

8 – Was information about food preparation practices collected as part of the dietary recall questionnaire? Are these practices fairly consistent across the region?

9 - Was information collected about the water source(s) used for cooking?

10 – Was information collected about the water source(s) used for drinking and the general volume of consumed water?

11 – Could BMI be predictive of CKDu onset and severity in this region? If appropriate, please consider expanding discussion on this (page 7).

12 – The authors designing the study to capture seasonal variations in diet. Does the seasonal diet in this region vary significantly?

Minor Editorial Comments:

1 – Abstract (Background): Suggest changing ‘chronic exposure to heavy metal’ to ‘…heavy metals’.

2 – Recommend consistency throughout manuscript with use of #2-microglobulin acronym.

3 – Abstract (Results): Suggest adding period to end of paragraph.

4 – Suggest to capitalize “Study” in the “Dietary study” section header and to change “The Urinary” to “The urinary” in the first sentence of that section.

5 – Suggest adding spacing between paragraphs throughout.

6 – Suggest changing “with in” to “within” in 5th line of page 6.

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

**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.