Reviewer's report

Title: Calcium, phosphate, magnesium, and alkaline phosphatase gestational age-specific reference intervals for preterm infants

Version: 3 Date: 28 February 2011

Reviewer: I Schoenmakers

Reviewer's report:

Major Compulsory Revisions

- Throughout text
The authors should clearly state throughout the title and text that the reference ranges are for cord blood of infants, i.e. not infant blood or serum. These can be significantly different.
The authors refer to Ca, P, Mg, Alb and ALP as bone forming minerals: this is incorrect and should be removed.
The authors have measured total ALP, which reflects ALP as produced by the liver and bone. This should be stated as such.

- Materials and methods: addition to para1:
Procedure of cord blood collection:
- How long after delivery was cord blood collected; how was serum obtained (storage and duration of full blood; spinning conditions)
- How was ensured that only blood from the infant partition of the cord was collection (i.e. not from maternal side)
Laboratory methods: para 4: pls add external QA scheme if adhered to.

- Selection of subjects:
Methods para 1 mentions that term cord bloods were collected from singleton pregnancies only, whereas cord bloods from pre-term infants were collected from singleton to triplet pregnancies. This should be mentioned clearly. The author should address how this will impact on the statistical analyses.

- Statistical methods:
Pls consult an expert statistician for the models used, particularly the impact of forward multiple regression analyses

Minor Essential Revisions
The authors should tighten up some issues related to the use of short-hand in their language:
e.g 3rd para results; end of para

Triplet: is not a condition

PIH is a maternal condition, not an infant condition

- Results

Magnesium para, last sentence:
Regression analyses is never used to provide proof for causative links; the last part of the sentence is unclear: rephrase.

**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'