Reviewer’s report

Title: Twenty-four hours secretion pattern of serum estradiol in healthy prepubertal and pubertal boys as determined by a validated ultra-sensitive extraction RIA

Version: 1 Date: 27 May 2008

Reviewer: Anna-maria Andersson

Reviewer’s report:

Study on estradiol levels in prepubertal and pubertal boys measured with an ultra-sensitive assay. Estradiol is considered to be biological significant even in the low levels found in children and in early puberty and the present manuscript provides information on the levels present in serum during this period of life in boys.

Minor Essential Revisions:
1) page 5, estradiol determination: please define how detection limit and functional sensitivity of the assay are defined. E.g. is detection limit based on 2 or 3 x SD of 0-standard and is functional sensitivity based on CV% ?
2) figure legend for figure 3: not clear to me how the sentence “Data are shown as the mean value +/- SEM for each pubertl group and each line represents on pubertal stage” should be interpreted. Is it the mean +/- SEM of the individual % difference from the individual mean values that is shown for all boys in same pubertal group? Please clarify.
3) figure 5: why is there shown 3 puberty groups but only 2 correlation lines? Is it evident that the data for early and mid puberty can be looked at together regarding correlation between testosterone and estradiol?

Discretionary Revisions:
1) page 3, second paragraph: add “analytical” in “… been fraught with problems of analytical insensitivity, lack of specificity …..”
2) page 3, second paragraph, last line: add ”more resembling values measure by” in …. Have been shown to giver lower values more resembling values measured by mass spectrometry”
3) Figure 1 A and B: please use the same labels for the X-axis on both figures.

Level of interest: An article whose findings are important to those with closely related research interests

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