Reviewer's report

Title: Celecoxib decreases prostaglandin E2 concentrations in nipple aspirate fluid from high risk women and women with breast cancer

Version: 1 Date: 15 July 2006

Reviewer: Gillian Mitchell

Reviewer's report:

General

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Materials and methods: paragraph 3, page 5 - what happened to the recruitment data from subjects in 2003? What was the definition of evaluable and how many subjects enrolled were unevaluable? Paragraph 2 page 6 - what is a green top tube, international readers may not use the same blood collection system and it would be better to state that it was "clotted blood", for example.

Results. My main concerns relate to the interpretation of PGE2 levels in high risk women. On page 8 it is stated that when evaluating the effect of celecoxib on PGE2 in high risk women, PGE2 levels in plasma or NAF did not change (clearly seen in tables 2 and 3), but on page 9 and in the discussion (page 11) the statement is made that PGE2 levels decreased in the NAF but not the plasma of high risk women with Celecoxib treatment. This effect was only observed in table 4 once the high risk group was split into pre and postmenopausal groups and comparisons between before treatment and after washout made. By this time the numbers are extremely small. Further, the statement that PGE2 levels decreased in the NAF of postmenopausal high risk women is difficult to substantiate (abstract, discussion page 11 and conclusion), as levels only decreased after the washout of the drug, not at the end of treatment with the drug, as they did in the cancer group. Finally in the discussion, page 12 paragraph 1, it is stated that a rise in NAF PGE2 levels was not seen after celecoxib treatment in this study in contrast to the earlier reported study, but table 4 shows a rise in levels in the premenopausal high risk group.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Methods: Paragraph 4 page 6, I do not think that a full description of the creation of a standard curve and derivation of levels of PGE2 in the study samples is necessary and that this section could be reduced to the summary provided in the first few sentences of paragraph 4.

Discussion: paragraph 1, this should read endogenous levels of PGE2 rather than endogenous PGE2 production in NAF.

Discretionary Revisions (which the author can choose to ignore)

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions.

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

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests.