Reviewer's report

Title: Membrane testosterone binding sites in prostate carcinoma as a potential new marker and therapeutic target: Study in paraffin tissue sections

Version: 1 Date: 21 February 2005

Reviewer: Tapio Visakorpi

Reviewer's report:

General
The topic of the paper, membrane androgen receptor, is quite debatable. There are evidences that such receptor exists, provided also by the authors in previous papers. However, no receptor molecule have yet been identified and purified. Thus, the focus of the research should be in identification of the actual receptor molecule. Meanwhile, the indirect measurement of the receptor, with e.g. binding assays, is appropriate. The paper has merits, but the method should be better validated.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
Authors used formalin-fixed paraffin embedded samples for measurement of the receptor. It is almost amazing that such samples can be used in a binding assay. Authors should use several controls to validate the method. For example, authors have previously used freshly prepared samples for the assay. Now authors could compare the measurement of the receptor in fresh and fixed tissue from the same tumors. Authors could also use both membrane-receptor negative (if there are such) and positive cell lines as controls. That is, process them in same manner (formalin and paraffin embedding) as the tissue samples.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
Some wordings in the paper are not optimal. For example, in page 9, "gravity of the disease" is an inaccurate term. For example, term "differentiation" would be better, since association with grade and Gleason score was studied.

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 of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: No