Reviewer’s report

Title: Fast growth associated with aberrant vasculature and hypoxia in fibroblast growth factor 8b (FGF8b) expressing PC-3 prostate tumour xenografts

Version: 1 Date: 18 June 2010

Reviewer: Jan Bussink

Reviewer’s report:

Major Compulsory Revisions:
None.

Minor Essential Revisions:
1) Spelling mistake in Background, paragraph 5: ‘xenogratfs’ has to be ‘xenografts’
2) Figure 2A: no tumour volume number at 5 and 6 week-point for VEGF tumours, and no 6 week-point for FGF8b tumours, while these numbers are mentioned in the Results section. For a good comparison, all data points should be present in the graph.
3) Discordances between terms used in Results section and in Graph. Figure 2D/Results, paragraph 2: The unit of the density of capillaries is µm/mm² as stated in the text. However, in the graph of Figure 2D the unit mm² is used. Figure 3/Results, paragraph 5: The proportion of Ki67-positive cells is given as an percentage in the Results section, while the title of the y-axis of the graph in Figure 3 is ‘Ki67-posit./mm²’.
4) Results, paragraph 4: In last sentence of paragraph it is mentioned that ‘a lower expression pattern of GLUT1 in VEGF tumours compared with the others (p<0.05).’ This should be ‘compared to mock tumours’. There is no significant difference between FGF8b and VEGF tumours (as mentioned in the figure legend of Figure 6).
5) Legends to Figures, Figure 2B: The mean densities of CD31-positive blood capillaries are switched between FGF8b and VEGF tumours (97 ± 4 and 51 ± 27 are switched).
6) Figure 4C: There are three horizontal lines in the graph in the data points for each tumour group. It should be defined what these lines represent.

Discretionary Revisions:
1) Optimisation of staining images: In Figure 2B, the images of the H&E staining look overexposed and the purple and pink colours are very intense. Consequently, the morphology is hard to distinguish. More optimal recording of the images would address this problem. In addition, in the GLUT1 staining of
mock tumour (Figure 6C) it is very hard to distinguish positive and negative stained cells, since the staining looks different from the staining in the other tumours. A clearer image would support the differences observed between the different tumour groups.

2) With all kinds of different techniques and markers the authors have made an extensive comparison between mock, VEGF and FGF8b tumours. However, the immunohistochemical staining of HIF1# is only compared between FGF8b and mock tumours. It would be interesting to extent this comparison to the VEGF tumours to see whether a different expression pattern of HIF1# is observed.

3) Figure 3: To be able to compare the three different tumour groups in one view, the two graphs should be joined to 1 graph. Thus, similar to the graphs in the other 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.