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The role of FABP9 in prostate cancer

Majed Al Fayi, Syed A Hussain, Philip A Cornford and Youqiang Ke
Liverpool University, UK

Although a large number of studies have been performed on the promoting role of FABP5 in malignant progression of prostate cancer, the possible involvement of other FABP family proteins is not clear. In this work, we have first measured the expression levels of 10 members of FABP family in six human prostate cancer cell lines with q-PCR technique and found that FABP9 is one of the most differentially expressed between the benign and the malignant cells. Western blot analysis showed that FABP9 protein was highly expressed in highly malignant cell lines PC3 and PC3-M. Whereas in the benign PNT2 cells and in low or moderately malignant cell lines LNCaP, 22RV1 and DU145, no FABP9 expression was detected. Immunocytochemical analysis in an archival set of prostate tissues showed that the expression level of FABP9 was significantly higher in carcinoma tissues than that in BPH. In carcinomas, the increased expression of FABP9 was significantly associated with the increasing malignancy. While the increased expression of FABP9 was significantly associated with the increased Gleason scores and the AR level, it was significantly correlated with the reduced patient survival. Suppressing FABP9 expression in highly malignant PC3-M cells inhibited invasiveness of prostate cancer cells. Our results suggest that FABP9 is a useful prognostic marker to predict the outcome of prostate cancer patients and it may play a role in promoting invasiveness of the cancer cells.

Biography

Majed Al Fayi is currently a PhD student in Molecular Pathology from the University of Liverpool. He has completed his MSc degree in Biomedical Sciences in 2011 from Hull University. He is a co-author in a paper published in *Oncotarget*.

qahtan@liverpool.ac.uk

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