Author's response to reviews

Title: Both Talin-1 and Talin-2 correlate with invasion and migration in human hepatocellular carcinoma

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Author's response to reviews: see over
Dear Editor,

We would like to submit the enclosed manuscript, which we wish to be considered for publication in Journal of BMC cancer.

Title: Both Talin-1 and Talin-2 correlate with invasion and migration in human hepatocellular carcinoma

Authors: Kun-peng Fang, Yan-hong Ren, Wei Dai, Chuan-Ye Xu, Min-she Zhang, Ye-Ben Qian

Talin-1 (TLN-1) is a cytoskeleton protein that participates in cell migration and plays a role in tumor formation, migration, and metastasis in different types of cancer. Therefore, Talin-1 represents a potential diagnostic and prognostic marker that merits further investigation. Talin-2 (TLN-2) encodes a protein with 74% similar amino acid sequence identity with the TLN-1 protein; however, the role and function of TLN-2, as a homologous gene of TLN-1, in tumors remain unclear. In our previous research, we observed that different liver cancer cell lines exhibit different invasion and migration abilities. TLN-1 and TLN-2 expression was associated with the invasion and migration of human liver cell lines. High levels of Talin-1 expression correlated with reduced invasion and migration and with decreased malignancy in human liver cell lines; additionally, Talin-1 suppression promoted invasion and migration.

We hypothesized that both TLN-1 and TLN-2 correlate with invasion and migration in human hepatocellular carcinoma (HCC); therefore, we used lentiviral vector-induced TLN-1 knockdown in the MHCC-97L cell line, which highly expresses TLN-1. We concluded that both TLN-1 and TLN-2 correlate with invasion and migration in human HCC. Tln1 expression may restrict the activity of the TLN-2 protein and the expression of TLN-2 mRNA.
TLN-2 might be important for conferring a strong mechanical link between integrins and the cytoskeleton. TLN-1 and TLN-2 gene expression is altered in tumors. High levels of TLN-1 expression and low levels of TLN-2 expression correlate with reduced invasion and migration and with decreased malignancy. Additionally, TLN-2, as the unique ancestral TLN gene, can compensate for the loss of TLN-1 gene expression.

We have reviewed the final version of the manuscript and have approved its submission for publication. To the best of our knowledge, this manuscript has not been previously published in whole or in part nor is it being considered for publication elsewhere. We believe that this paper may be of particular interest to the readers of your journal.

Correspondence and phone calls regarding this paper should be directed to Qian Ye-Ben at the following address, phone and fax numbers, and e-mail address.

Thank you very much for your attention to our paper.

Sincerely yours,

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