Nature Reviews Gastroenterology & Hepatology **10**, 260 (2013); published online 2 April 2013; doi:10.1038/nrgastro.2013.58

HEPATOCELLULAR CARCINOMA

Actopaxin has a role in HCC metastasis

Previous studies have shown that actopaxin, a focal adhesion protein, is involved in cell migration, invasion and matrix degradation, which are important steps in cancer metastasis. Owing to these findings, Roberta Pang and co-workers from the University of Hong Kong felt confident that this protein might have a role in hepatocellular carcinoma (HCC) metastasis and decided to investigate their theory.

The researchers used three lines of investigation in their study: first, they examined actopaxin expression in samples from patients with HCC; second, they investigated whether actopaxin regulates cellular processes that lead to metastasis (such as cell migration and invasion) in an HCC cell line; and third, the researchers studied the effects of actopaxin repression on HCC metastasis *in vivo*.

Actopaxin was found to be frequently overexpressed in patients with HCC, and overexpression correlated with the development of metastases. Suppression of actopaxin was found to impair HCC metastasis in the cell line and the mouse models. Moreover, downregulation of actopaxin in the HCC cell line enhanced the chemosensitivity of these cells.

The authors are hopeful that actopaxin might be a potential therapeutic target in HCC. "Data from this study provide concrete evidence of an important role of actopaxin in HCC progression and metastasis," says Pang. "We believe that further work on actopaxin suppression will be beneficial for combating metastasis and chemoresistance in HCC, and hopefully in other types of cancer."

Isobel Leake

Original article Ng, L. *et al.* Suppression of actopaxin impairs hepatocellular carcinoma metastasis through modulation of cell migration and invasion. *Hepatology* doi:10.1002/hep.26396