

LIMK plays a key role in cancer metastasis

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Researchers have shown that LIM kinase (LIMK), an important regulator of actin cytoskeleton dynamics, plays a key role in cancer metastasis. The study appears online on September 27 in *The Journal of Cell Biology*.

Cancer metastasis is a multi-stage process that starts with the invasion of tumor cells into their surrounding tissue. The ability of metastatic cells to invade requires reorganization of the actin-myosin cytoskeleton, which is controlled by a sophisticated network of signals sent between a number of cellular components.

LIMK has been shown previously to facilitate tumor invasion through its role in actin regulation. Researchers from the United Kingdom delved deeper into the role of LIMK in this process. The team showed that LIMK is specifically required for cells at the front of the invading tumor to clear a path that the remaining metastatic cells can follow. Working with [breast cancer](#) and squamous [carcinoma](#) cells, the team found that inhibiting LIMK function blocked the collective invasion of tumor cells, thus preventing these cells from metastasizing.

The authors propose that LIMK inhibitors might be effective in the treatment of cancers such as prostate cancer, where the presence of localized tumors might not be life threatening but mortality can result from metastasis.

More information: Scott, R.W., et al. 2010. *J. Cell Biol.*
[doi:10.1083/jcb.201002041](https://doi.org/10.1083/jcb.201002041)

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