

Cancer cells metastasize by hitching a ride on platelets

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Metastasis of cancer cells to sites distant from the primary tumor is the leading cause of cancer-related death, and there is growing evidence that platelets aid the dissemination of cancer cells.

In this issue of *JCI Insight*, Pierre Henri Mangin and colleagues at the Etablissement Français du Sang-Alsace have shown that a molecule expressed on platelets, known as $\alpha 6 \beta 1$ integrin, participates in tumor metastasis by promoting interactions between tumor cells and platelets. Compared to control animals, mice lacking $\alpha 6 \beta 1$ integrin specifically on platelets exhibited decreased lung metastasis after injection of [tumor cells](#) intravenously or into the mammary fat pad.

Mangin and colleagues determined that the tumor cell protein ADAM9 binds platelet $\alpha 6 \beta 1$ integrin to promote platelet activation and tumor cell extravasation. Importantly, antibody-mediated blockade of $\alpha 6 \beta 1$ integrin inhibited [tumor metastasis](#) in murine models of breast cancer and melanoma. These findings suggest that disruption of tumor/platelet interactions could prevent metastasis.

More information: Elmina Mammadova-Bach et al, Platelet integrin $\alpha 6 \beta 1$ controls lung metastasis through direct binding to cancer cell-derived ADAM9, *JCI Insight* (2016). [DOI: 10.1172/jci.insight.88245](#)

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