

# Natural killer cells used to attack spreading cancers

20 February 2014, by David Stacey



An international research team has found a way to awaken the immune system's ability to kill spreading cancer cells.

The key finding published today in *Nature* is that the spread of cancer cells can be markedly reduced by targeting the [biochemical activity](#) of a class of [receptors](#) called TAM receptors.

The finding came from studying natural killer cells, a type of blood cell that can induce the death of cancer cells.

Co-author, Research Professor Wally Langdon from The University of Western Australia School of Pathology and Laboratory Medicine said it was found that mice without healthy versions of another protein called Cbl-b, had [natural killer cells](#) that had a heightened ability to prevent the spread of cancer cells.

"It was then discovered that the Cbl-b protein regulates the activity of TAM receptors, and therefore the anti-cancer effect seen in Cbl-b mutant mice might be mediated through its effects on TAM receptors," Professor Langdon said.

To test this possibility the team developed a new drug, a highly selective TAM inhibitor that blocked the receptors. It was found that treating mice with the TAM inhibitor resulted in a significant reduction in the spread of melanoma and [breast cancer cells](#).

"These findings reveal that a drug such as the TAM inhibitor can awaken the immune system's ability to kill spreading [cancer cells](#), therefore providing an additional approach to enhance cancer treatment," Professor Langdon said.

**More information:** "The E3 ligase Cbl-b and TAM receptors regulate cancer metastasis via natural killer cells." Magdalena Paolino, et al. *Nature* (2014) DOI: [10.1038/nature12998](#)

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