

# Natural killer cells used to attack spreading cancers

February 20 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](https://doi.org/10.1038/nature12998)  
Received 19 November 2012 Accepted 03 January 2014 Published online 19 February 2014

Provided by University of Western Australia

Citation: Natural killer cells used to attack spreading cancers (2014, February 20) retrieved 27 April 2024 from <https://medicalxpress.com/news/2014-02-natural-killer-cells-cancers.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private

study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.