

Why cancer cells just won't die (w/ Video)

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When cells experience DNA damage, they'll try to repair it. But if that fails, the damaged cells are supposed to self-destruct, a process called apoptosis. A cancer researcher at Robarts Research Institute at The University of Western Ontario has identified a protein that regulates apoptosis, a new discovery which has implications for both the diagnosis and treatment of cancer. Caroline Schild-Poulter's findings are now published online in the journal *Molecular Cancer Research*.

"The [protein](#) we've identified, RanBPM, is directly involved in activating apoptosis," explains Schild-Poulter who is also an assistant professor in the Department of Biochemistry at Western's Schulich School of Medicine & Dentistry. "One of the hallmarks of [cancer](#) is that the [cells](#) don't initiate apoptosis despite having defects in their genetic material. In other words the damaged cells do not commit suicide, and this develops into cancer. Failure to activate apoptosis also makes it difficult to cure cancer. You cannot kill these cells by causing [DNA damage](#) to them using chemotherapy or radiation, because these cells resist dying."

While more research is needed to fully understand how this protein functions, Schild-Poulter believes RanBPM could be targeted to re-activate apoptosis, killing cancer cells. The protein may also be a marker used to predict whether a tumour will go on to become malignant.

Source: University of Western Ontario

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