

## **A new combination of drugs can bring hope to leukaemia patients**

*Barbara Axt*

A study published in the journal *Cancer Cell* brings new possibilities to leukaemia treatment, proposing an experimental combination of drugs that destroy some types of Acute Myeloid Leukaemia (AML) cells that are often resistant to chemotherapy.

Researchers at the University of Texas M. D. Anderson Cancer Center assessed, in the laboratory, a combination of experimental drugs in restoring the process known as apoptosis in AML cells.

Apoptosis is the process by which a cell self-destructs because it is seriously injured or growing out of control. Leukaemia cells often have abnormalities in this process, leading to dangerous levels of multiplication. It happens, for example, when a protein known as anti-apoptotic latches on to the apoptotic protein, blocking the cell's suicide mechanism.

The combination tried in this study contains two experimental drugs, one of them called ABT-737 and the other being a MAP-kinase inhibitor. These molecules latch on to in two types of anti-apoptotic proteins, restoring the cell's ability to destroy itself and halting the cancer.

"The combination of these two experimental drugs provides the highest synergistic action I have ever seen against AML cells," said the study's lead author, Michael Andreeff, M.D., Ph.D., professor in the Departments of Stem Cell Transplantation and Leukemia.

The study was done in laboratory cell cultures WITH AML cells obtained from patients, but Andreeff hopes that THE NEW combination of agents could be tested in eligible patients when they receive standard chemotherapy treatment.