

Two drugs are better than one in fight against leukaemia

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Dr Laura Eadie at work in the SAHMRI Leukaemia Research Laboratory.
Credit: SAHMRI

Adelaide scientists have devised a way to enhance the effectiveness of a patient's leukaemia treatment by using a combination of drugs.

Chronic myeloid leukaemia (CML) is a [cancer](#) of the blood and, while current treatments are effective in the majority of [patients](#), approximately 20 per cent of patients stop responding to the therapy and relapse.

"It is these high-risk patients for whom we need to develop better, and more personalised treatments," says Dr. Laura Eadie from the South Australian Health and Medical Research Institute (SAHMRI).

Laura looked at why some patients become resistant to treatment, and in a world-first, identified a protein on the [outer membrane](#) of the cancer cells that pushes the leukemia drug molecules out of the cells.

This results in reduced concentrations of the drug inside the cells to kill the cancer.

"I proposed that by treating cancer cells with a leukaemia drug as well as a second drug that inhibits the cancer cell protein, the leukaemia drug would be more effective at killing the cancer," she says.

And this is exactly what she observed. When [cancer cells](#) were treated with both drugs, the cancer was inhibited up to 56 per cent more effectively than when either drug was used alone, and that's good news for CML patients.

"We believe treating CML patients with this drug combination will give them the best chance of long-term survival," says Laura.

Importantly the second [drug](#) is already being to treat other diseases, which means its safety and possible side effects have already been studied.

Hopefully this will mean a quicker route from the lab to the clinic for

this promising new therapy.

Provided by Freshscience

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