

Cannabinoids used in sequence with chemotherapy are a more effective treatment for cancer

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Credit: St. George's University of London

New research has confirmed that cannabinoids - the active chemicals in cannabis - are effective in killing leukaemia cells, particularly when used in combination with chemotherapy treatments.

Researchers also found that sequential use of an initial dose of chemotherapy first and then cannabinoids significantly improved overall results against the blood cancer cells. They found that combining existing chemotherapy treatments with cannabinoids had better results than chemotherapy alone, meaning that a similar level of [effect](#) could be achieved through using a lower dose of the chemotherapy. If this were translated to humans, this lower dose of chemotherapy would mean that the side-effects of chemotherapy could be lessened.

Dr Wai Liu led the study at St George's, University of London, which was published in the International Journal of Oncology. He said: "We have shown for the first time that the order in which cannabinoids and chemotherapy are used is crucial in determining the overall effectiveness of this [treatment](#)."

"These extracts are highly concentrated and purified, so smoking marijuana will not have a similar effect. But cannabinoids are a very exciting prospect in oncology, and studies such as ours serve to establish the best ways that they should be used to maximise a [therapeutic effect](#)."

Cannabinoids are the active chemicals in cannabis, known more specifically as phytocannabinoids. When extracted from the plant and purified, they have been shown to possess anticancer properties, especially in certain cancers of the brain.

Researchers looked at cancer cells in the laboratory, trying different combinations of cannabinoids against leukaemia cells. They tested whether existing [chemotherapy](#) treatments worked effectively alongside the cannabinoids, and whether using the drugs in a different order had an effect.

A number of clinical studies are underway that are assessing the full

potential of cannabinoids in patients with [cancer](#). Researchers say more trials need to be carried out to establish the veracity of the claims.

Provided by St. George's University of London

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