

Plant extract from traditional Indian medicine may fight blood cancer

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A University of Kentucky study shows that withaferin A, a component

of *Withania somnifera* (winter cherry) plant extract, may hold promise as a new treatment for non-Hodgkin's lymphoma.

Winter cherry extract was used in traditional Ayurvedic Indian medicine for thousands of years before it caught the interest of Subbarao Bondada, a University of Kentucky College of Medicine professor and researcher for the UK Markey Cancer Center. Because withaferin A shows promise in treating other cancers without the side effects associated with current treatments, Bondada's laboratory tested it against lymphoma. Non-Hodgkin's lymphoma is one of the most common cancers in the U.S. and is known for being particularly aggressive.

Unlike other studies using withaferin A to treat cancer, Bondada's study, published in the journal *Cancer Biology and Therapy*, is the first to test the chemical against a blood cancer. Previous studies using withaferin A focused on cancers producing tumors that grow as a mass in tissue, more commonly known as solid tumors.

Katie McKenna, a graduate student in Bondada's laboratory, found that withaferin A prevented the [lymphoma cells](#) from dividing and ultimately killed them. Specifically, they found withaferin A directly targeted a signaling pathway in the [cancer](#) it needs to survive.

"It may be possible to develop orally administered versions of withaferin A that could be used in [lymphoma patients](#) with fewer side effects than current chemotherapy regimens," Bondada said.

Because withaferin A shows promise in treating non-Hodgkin [lymphoma](#), Bondada's team is now testing the chemical on chronic lymphocytic leukemia cells.

Provided by University of Kentucky

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