

Frankincense tested as possible breast, colon cancer treatment

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The Indian frankincense tree grows in India, North Africa and the Middle East.
Credit: Medical University of South Carolina

Cancer surgeon and researcher Nancy DeMore is leading a clinical trial using frankincense to try to treat breast and colon cancer at the Medical

University of South Carolina. The study was inspired by a research specialist in DeMore's lab.

Ingrid Bonilla had researched [frankincense](#) as a treatment on [breast cancer cells](#) as an undergraduate student at Charleston Southern University. "Seeing encouraging results in our lab, I did my research on clinical studies with frankincense. I contacted the author of the only published breast [cancer](#) clinical case study to find out more."

DeMore, who has done extensive research on new treatments for [breast cancer](#), was willing to put it to the test. "It's nice to see doctors like her who think outside the box," Bonilla says. "Out of all the physicians that I talked to about this, Dr. DeMore was the only one who was interested in moving this forward."

DeMore says boswellic acid, the extract from Indian frankincense, may help patients by reducing inflammation. The chemical structure of boswellic acid is similar to other anti-inflammatory drugs such as ibuprofen. Bonilla and DeMore wrote the current clinical trial with data from clinical [trials](#) of the extract in Europe.

DeMore says their study is "window of opportunity" trial that takes advantage of the window of time between the initial diagnosis of breast or [colon cancer](#) and surgery to remove the cancer. The patient will take boswellia while waiting for surgery.

"Tumor from the biopsy that was taken to make the diagnosis of cancer before treatment will be compared to the tumor taken at surgery after treatment," DeMore said. "This will allow us to assess whether taking boswellia changes the biology of the tumor."

Frankincense would not be the only plant-based treatment for illness. For example, digoxin, from the foxglove plant, is used to treat cardiac

arrhythmias. DeMore says it's important to put potential treatments through rigorous testing. "A lot of herbs and alternative therapies haven't been studied scientifically, so it's really important to know, in a well-designed clinical trial, these natural products work."

DeMore started her research into natural products with curcumin in the 1990s. Extracted from turmeric, curcumin inhibits blood vessel growth in tumors. Slowing the growth of new blood vessels in tumors is a common approach to treating many cancers.

DeMore then set out to test medicinal uses of other natural products. "What we are really committed to doing is to study [natural products](#) in a well-designed clinical trial to prove whether or not there is a benefit. We don't know if it's going to work."

While the preclinical evidence for boswellic acid seems promising, it's important not to replace standard treatment with natural therapies that haven't been studied well, Demore says. "The traditional treatments that we advise for patients have been through extensive, rigorous [clinical trials](#) where the benefits of [treatment](#) are well-known, as are the side effects."

She says therapies that aren't based on clinical trial results could have unexpected side effects, or even harmful effects. She also says people should be aware that over-the-counter frankincense may not contain the dosage or quality of the extract being tested in this study.

Bonilla is just grateful that DeMore took her idea seriously. "Sometimes I'm, like, 'Wow! I never pictured myself five years ago sitting here and being involved in anything like this.' I consider myself very blessed," she says.

Provided by Medical University of South Carolina

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