

Researcher finds success with new anti-cancer drug

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A study conducted at Scott & White Healthcare in Temple, Texas, found that a new drug stopped the growth of breast tumors in mice. This drug is unique in that it works both by stopping the cancer cells from growing and metastasizing to other organs, and by stimulating the immune system to destroy breast cancer cells and keeps them from coming back. This is the only drug that's able to work in both ways, while all other treatments work in one way or another. And, this research initiative not only involves physicians and biologists working together to bring treatments from the laboratory to the bedside, but a unique third component - agriculturalists.

Researcher Alexzander Asea, Ph.D., the Effie and Wofford Cain Endowed Chair in Clinical Pathology, and division chief of investigative pathology at Scott & White Healthcare and the Texas A&M Health Science Center, said "we found that some of the mice were essentially cured."

"All anti-cancer drugs broadly fall into two categories; either directly killing cancer cells (often healthy cells as well), or vaccines that help sick patients by boosting the immune system to better fight off cancer. This new drug works both ways, as a vaccine by taking away the cancer cell ability to grow, multiply and spread to distant organs, and by educating the immune system to recognize the [breast cancer](#) cells as 'foreign invaders' that need to be attacked and destroyed — and to continue that process over time," Dr. Asea said.

Dr. Asea went on to say "breast cancer cells fly under the radar of the immune system, by turning off the machinery that normally puts recognition structures on the surface of cancer cells which the immune system uses to recognize and destroy them. To overcome this problem, this injectable drug turns on this machinery within the cancer cells allowing the [immune system](#) to recognize the cancer cells and kill them. The unique thing is that the revved-up immune cells will continue patrolling for any hidden cancer cells months and years after the last [cancer cells](#) have been killed," Dr. Asea said.

"Collaborating with the agricultural community on this research also allows us to use a special delivery mechanism of the drug that doesn't cause the negative side effects you see with more traditional treatments like chemotherapeutic agents," explained Dr. Asea.

Dr. Asea said only about one year of additional work is required before Phase I clinical trials can begin in women with metastatic breast cancer at Scott & White Hospital. "However, this stage requires a significant amount of funding. We're currently looking at various sources including federal, state and private sources to get this promising drug to the patients who need it."

Provided by Scott & White Healthcare

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