Plant Based Research – Breast Cancer Treatment

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Basil is an herb widely known for it’s medicinal and culinary uses …..but can it fight cancer?

In this week’s View from the Hill, Amy Bingham shows us the important research being done at WKU that may result in the cancer treatment we’ve been waiting for.

About one in eight women in the U.S. will develop invasive breast cancer during their lifetime.

A plant-based treatment for breast cancer is currently being researched in nearby Owensboro.

“If I can show it stops breast cancer growth, I have now environmentally friendly plant based treatment for breast cancer.”

That’s the goal of Dr. Chandra Emani, an assistant professor of plant molecular biology.

He’s conducting research on the basil plant at Owensboro’s Center for Business and Research.

“Basil is a plant which has a lot of compounds called metabolites meaning the leaves of a basic basil plant, like any other plant, make a lot of stuff.”

“One of those important compounds has a very great pharmaceutical value because it’s shown to control breast cancer.”

That compound in basil is called Eugenol. Using a twelve thousand dollar grant from WKU’s Office of Research, Emani and his students are genetically engineering the basil to produce more eugenol.

“If I make it make higher and higher amounts of eugenol, that plant, basil plant, will be a storehouse of that anti cancerous compound.”

Emani says a proof of concept experiment has already shown what eugenol can do.

“Eugenol, when they put it on a plate where there are tumor cells, it stopped growth of the tumor cells. “

He calls this grant funded research a huge stepping stone in treating cancer in a holistic way.

“By doing this research, people now know there’s a bio chemical basis to it so they can do clinical trials and try to see if this is an effective way to get a pharmaceutical compound from a plant.”

If this phase is successful, the next step would be to get additional research funding that could lead to clinical trials.

Dr. Emani’s lab is located at the Owensboro Center for Business and Research, a business accelerator and research facility that opened in 2010.

 With this week’s View from the Hill.

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