

Study finds vegetable-derived compound effective in treating triple-negative breast cancer

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A new compound created from a rich source in vegetables including broccoli and brussel sprouts has been developed to combat triple-negative breast cancer (TNBC). This research is being presented at the 2012 American Association of Pharmaceutical Scientists (AAPS) Annual Meeting and Exposition, the world's largest pharmaceutical sciences meeting, in Chicago, Ill., on Oct. 14 – 18, during Breast Cancer Awareness Month.

TNBC accounts for approximately 15-20 percent of all [breast cancer](#) cases in the U.S. It is one of the most aggressive forms of breast cancer; it grows faster, spreads to other parts of the body earlier, is harder to detect on a mammogram and recurs more often.

Mandip Sachdeva, Ph.D. and Chandraiah Godugu, P.h.D. from Florida A&M University, in collaboration with Stephen Safe, Ph.D., from Texas A&M University, have evaluated the activity of novel C-substituted diindolylmethane (C-DIM) derivatives and demonstrated that they have superior anticancer activities. Sachdeva's study reveals that these synthetic compounds derived from diindolylmethane (DIM), commonly found in various types of cruciferous vegetables, can be used to treat several types of cancer, including triple-negative breast cancer. C-DIMs are also being investigated for their cancer prevention activity.

"Targeted treatment options for TNBC are limited; current treatments,

such as infusions, result in poor patient compliance and increased toxicity," said Sachdeva. "We are confident that the compounds we are currently working with are an effective treatment for triple-negative breast cancer. These compounds are safer for the patient than current treatments available."

In contrast to existing anticancer drugs, the diindolylmethane compounds are orally active, so they could be available to patients in pill form and safe to take daily. When taken in combination with existing anticancer drugs, the diindolylmethane compounds can effectively decrease the number of treatments a patient receives.

Provided by American Association of Pharmaceutical Scientists

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