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Unique Micronutrients Reduces Prostate Cancer Incidence

PROSTATE CANCER

Unique Micronutrient Mix Shows Reduction of Prostate Cancer Incidence
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Sunnybrook researchers find that lycopene may act as a catalyst in the mix to enhance vitamin E and selenium potency.

Early start of a unique micronutrient combination of vitamin E, selenium and lycopene has a chemo-preventive effect to reduce the incidence of prostate cancer in the preclinical mouse model (Lady Transgenic) which better mimics the development of prostate tumour growth in humans, with more indolent disease, Sunnybrook researchers reveal in a study published online in Cancer Prevention Research.

"Our study set out to find the right combination of micronutrients, at the right intervention time, to best reduce the incidence of prostate cancer," says Dr. Vasundara Venkateswaran, lead investigator and scientist, Division of Urology, Sunnybrook Health Sciences Center. "If proven further through future clinical trials as a preventive strategy, this early intervention of a unique micronutrient combination has the potential to prevent the development of tumors in patients with enlarged prostate glands and in patients at higher risk."

In the study Sunnybrook researchers may also have uncovered new clues about the mechanism of action of these micronutrients. "Lycopene may act as the 'ringer' for the 'team' of this micronutrient combination that works as a catalyst to optimize the anti-oxidant performance of vitamin E and selenium, or to cause the death of cancer cells," says Dr. Venkateswaran, assistant-professor Department of Surgery, University of Toronto.

The Lady Transgenic mouse model at four to 8 weeks of age is comparable to the third to 4 decade of a man's life stage when microscopic areas of non-threatening, low-grade prostate cancer might normally begin to develop with age. Study findings indicate maximum benefit of prostate cancer reduction, in Lady Transgenic mice exhibiting normal prostate gland when the researchers performed an intervention within four to 8 weeks of age with a combination of vitamin E, selenium and lycopene. Study findings also confirm that vitamin E, selenium and lycopene inhibit tumor growth across initiation and progression stages (from four weeks to 36 weeks of age), with increased overall survival across all ages from four to 36 weeks, and an increase in the protein p27Kip-1 an important marker in the prognosis of several cancers including prostate cancer.

"Our study complements the outcome of the SELECT (Selenium and Vitamin E Cancer Prevention Trial) which showed lack of patient benefit using vitamin E and selenium alone or in combination, and supports the rationale for future clinical trials to include a third component, lycopene as we have shown pre-clinically, the efficacy of the combination of vitamin E, selenium and lycopene," says Dr. Venkateswaran.

Dr. Venkateswaran continues to collaborate with researchers including Drs. Laurence Klotz and Linda Sugar, Sunnybrook Health Sciences Center and Sunnybrook's Odette Cancer Center, and Dr. Neil Fleshner, Princess Margaret Hospital, to look at dietary interventions using vitamin E, selenium and lycopene at varying stages of tumor development in the mouse model.

Prostate cancer is the most common cancer among Canadian men. In 2009, an estimated 25,500 men will be diagnosed with prostate cancer, with an estimated 4,400 deaths.

This study is generously funded by the Prostate Cancer Research Foundation, and the Canadian Institutes for Health Research.

For the full news release and to watch the video of Dr. Vasundara Venkateswaran visit our website at www.ambiolife.com and go to the Prostate-BPH product page.