

Aged garlic could slow prostate cancer

A compound derived from aged garlic dramatically diminishes the growth of human prostate cancer cells, according to data from a new test-tube experiment.

Researchers from Memorial Sloan-Kettering Cancer Center in New York worked with a line of cells that retains many of the features characteristic of those in the diseased prostate. For instance, they multiply faster when exposed to testosterone, the primary male sex hormone, or to DHT, a far more potent analog that the body produces from testosterone.

The cultured cells also produce compounds characteristic of human prostate tumors, making them a good model of human disease, explains Richard S. Rivlin, Sloan-Kettering's director of clinical nutrition.

His group exposed the cells to S-allylmercaptocysteine (SAMC), a sulfur compound that forms as garlic ages. It caused the cancer cells to break down testosterone two to four times more quickly than normal—and through a route that does not produce DHT, notes John T. Pinto, a coauthor of the study. In this sense, he told *SCIENCE NEWS*, the garlic-derived compound “is doing the same thing that testosterone deprivation would do.”

At concentrations that could develop in the blood of people taking commercially marketed aged-garlic pills, SAMC slowed the cancer cells' growth by as much as 70 percent, compared to the rate in untreated cells. Pinto and Rivlin reported their findings in New Orleans last week at the Experimental Biology '97 meeting.

The compound offered a few other bonuses. It cut the production of two proteins (including prostate-specific antigen, or PSA) exuded by the cells and often used in blood tests for prostate cancer (see p. 240). However, Rivlin notes, the garlic-induced PSA decrease was greater than expected, “out of proportion to the decrease in cancer growth.” This might further retard a tumor's growth, Pinto says, since PSA itself can promote cancer cell proliferation.

From the results achieved at the low exposures in this study, SAMC “looks promising,” says Maurice Bennink of Michigan State University in East Lansing.

John A. Milner of Pennsylvania State University in State College, who heard the SAMC data reported in New Orleans, agrees. Especially with so few treatments available for prostate cancer, he says, “I think [the new study] is significant—no question about it.”

The results don't suggest there's any new value in flavoring entrees generously with garlic. “It is unlikely you could obtain [potentially therapeutic doses of SAMC] from eating fresh garlic,” Rivlin points out. The bulbs need to have been commercially aged for at least a year.

— J. Raloff