



Dr. Sandra Steingraber: poet, ecologist, cancer survivor

The Future of Cancer

SIU's two-day symposium presented the latest breakthroughs and new strategies in the war on cancer

As part of the opening events for the SIU Cancer Institute, the SIU Department of Internal Medicine sponsored a two-day continuing education symposium entitled "Advances in the Diagnosis and Treatment of Cancer."

The symposium highlighted innovative approaches to cancer and showcased innovative techniques, with an eloquent speech by poet/ecologist Sandra Steingraber, Ph.D., and an entire day of presentations.

To launch the symposium, SIU President James Walker, Ed.D., congratulated those involved in cancer research and treatment. "You know what the Cancer Institute will mean to Southern Illinois and to the many, many people who will be served and benefit from it ... the citizens of Illinois and others as well."

The highlight of the symposium was a fascinating lecture given by keynote speaker Sandra Steingraber, Ph.D. An ecologist, poet and cancer survivor, Dr. Steingraber, visiting assistant professor at Cornell Univer-

sity in New York, offered an eye-opening perspective on cancer, presenting the disease as a human rights issue. She is the author of *Living Downstream: An Ecologist Looks at Cancer and the Environment*. In the text, Dr. Steingraber cites a statistic from The World Health Organization, which found that "at least 80 percent of all cancer is attributable to environmental influences."

Dr. Steingraber stops short of directly linking her own battle with bladder cancer to environmental influences. But she noted that several of her family members residing in her hometown of Pekin, Ill., have suffered from the disease.

Her lecture interwove her personal journey with eye-opening facts, highlighting four points from *Living Downstream*, which balances her story as a cancer patient and biologist with technical issues of cancer such as data from cancer registries and immigrant patterns of cancer. "It's a science book and a story," said Dr. Steingraber.

From her extensive research, Dr. Steingraber noted the incidence of cancer in the population via cancer registries. "Illinois has a good registry that was established in 1986. It's considered the gold standard of registries in the country." She dismissed heredity patterns, improved detection and genetics as possible causes for the increase in non-tobacco-related cancer incidents in all age groups, among

all ethnicities and both sexes, which dates back to the second world war. "Pediatric cancers are up overall, especially leukemia rates. Testicular cancers are up among young men. ... Incidences of non-Hodgkin's lymphoma have tripled since 1950," noted Dr. Steingraber. "This gives us call for further inquiry." In Dr. Steingraber's own life, genetics cannot account for her and her family's history of cancer, since she is an adopted child.

Computer mapping, continued Dr. Steingraber, "clearly shows that cancer is not a random tragedy." She noted that non-Hodgkin's lymphoma distributes itself in places where herbicides and weed killers in agriculture are intensely used — notably in the Midwest and Great Plains states. In addition, research showed that "In 21 New Jersey counties, the risk of breast cancer rose the closer a woman lived to toxic waste dump sites."

"I don't argue that these patterns are anything but interesting correlations," says Dr. Steingraber. "But they're little red flags to indicate that maybe we should inquire further about this. The approach that we should take should be an interdisciplinary one when we think about cancer ideology."

Dr. Steingraber also noted that there are "a whole kaleidoscope of chemicals linked to cancer that exist inside all of us. This is not in dispute."

She conceded the multiple causes of cancer, which include inherited factors, lifestyle issues and environmental agents, which she calls the



“body burden” in *Living Downstream*. New data indicate that the timing of exposure to cancer-causing chemicals may be just as, if not more, important as the level of exposure. Embryos, fetuses and newborns are more susceptible to carcinogen exposure, as are adolescents.

“I’m interested in how many lives we could save if we got carcinogens out of the environment, out of people’s bodies and out of women’s uteruses,” says the professor.

Lastly, Dr. Steingraber cited studies of wildlife genetics, which have found that cancers in wildlife populations are “almost always related to an environmental problem. When you look at the same species in a cleaner environment, you don’t see those kind of cancers.”

Bringing the issue close to home for central Illinois residents, Dr. Steingraber noted the area’s abundant use of atrazine, a popular pesticide used in corn fields. She pointed out that atrazine has been banned in

Europe, where scientists have linked it to ovarian cancer. “Atrazine is the number one pesticide used here,” Dr. Steingraber declared.

Edward Moticka, Ph.D., associate dean for Research and Faculty Affairs, was impressed with the lecture. “These are the kinds of studies that need to be done,” he says, adding that there will be a place for such studies within the developing Institute at SIU. “Dr. Steingraber’s talk was an exciting start for the Cancer Institute,” he says.

Dr. Steingraber’s lecture made attendees aware of the very real dangers that may lie in our backyards. But the continuing education course, held the following day, gave hope of new weapons in the fight against cancer.

As an introduction to the Cancer Institute, the course featured 16 physicians and researchers from all over the nation. It focused on a variety of cancer-related topics, including patient-focused issues such as how physicians can break bad news

to patients in a supportive way and provide optimal end-of-life care.

“The program reflects the mission of the Cancer Institute,” says Pradboh Shah, M.D., who organized the Continuing Medical Education course. Dr. Shah is chief of the Division of Hematology/Oncology in the School’s Department of Internal Medicine. “We want to bring state-of-the-art knowledge to people in the Springfield area,” he says. “The School of Medicine is in the process of exploring many of the topics discussed.” These include innovative techniques such as stem cell transplants, sentinel node mapping in breast cancer and breakthroughs in genetics and cancer, including discoveries about heredity and DNA technology.

As the inaugural event for the Cancer Institute, the Symposium is considered a template for future strategies. “We took our first steps,” says Dr. Shah. “And we have quite a few steps to go. But it’s a good beginning.” ■