A lifelong interest in science combined with the desire to make life better for others made the study of medicine compelling for Raymond Bergan, MD, Professor of Hematology/Oncology and Preventive Medicine at Northwestern University Feinberg School of Medicine. “I just wanted to take care of people who really needed my help,” he says.

Bergan grew up in Eden, New York, a small rural town outside of Buffalo. The youngest of three boys, Raymond and his siblings loved being outdoors and especially liked camping out in the woods near their home. “We practically lived in the woods,” he says. “It was great.”

His interest in science began in childhood and led him to pursue a degree in biochemistry at the State University of New York at Buffalo. He received his MD from SUNY Syracuse, where he also did his residency in internal medicine. Bergan’s fellowship in medical oncology at the National Institutes of Health was followed by a research fellowship there in drug discovery. He came to Northwestern University in 1998.

Research Work
A scientist and oncologist, Bergan is Director of Experimental Therapeutics at the Lurie Cancer Center. His laboratory is interested in understanding the molecular pharmacology of cancer chemopreventive agents and elucidating the pathways that determine how cells regulate processes such as metastasis. A current project involves a natural product called genistein, (a chemical found in soy), which may inhibit metastases in prostate cancer.

In the mid-1990’s, after observing the low incidence of metastatic disease in the Chinese population, Bergan and his team hypothesized that soy, which features prominently in Asian diets, might play a role. They devised a study to test genistein and have so far completed Phase I trials and a Phase II trial to determine efficacy. Another, larger Phase II study to determine whether genistein blocks cancer cells from moving out of the prostate gland to other parts...
of the body, is underway. While research is ongoing, Bergan says, “it looks promising.” Genistein has been shown to be safe, is well tolerated, and has good pharmacology.

Bergan is also co-Director, along with Karl Scheidt, PhD, of the Northwestern Center for Molecular Innovation and Drug Discovery (CMIDDD), which promotes an interdisciplinary approach that researchers hope will lead to effective new therapeutics to combat cancer, neurodegenerative diseases and a host of other medical conditions. “Drug discovery requires people from very different backgrounds,” says Bergan. “We need chemists to create new small molecules, biologists to analyze them in the laboratory, and physicians to understand the concepts related to humans.”

Bergan and Scheidt are working on developing a chemical agent they hope will prove to be more targeted, and perhaps more potent, against prostate cancer metastases. While natural compounds, such as genistein, have many advantages, they tend to do several things at once, Bergan explains. Over time, “those things can cause problems for patients.” Chemical agents, on the other hand, can be more specific.

Still in its early stages, their research is encouraging. “We’ve found the compound works on human prostate cancer cells in vitro, and stops the cells from metastasizing in mice,” Bergan says.

Cancer Prevention Program
In addition, Bergan is Co-Leader of the Lurie Cancer Center’s Cancer Prevention Program, a multidisciplinary effort focused on epidemiology, early detection, chemoprevention, and behavior modification. He works closely with Bonnie Spring, PhD, a psychologist and expert in behavioral risk factors who shares the leadership role with him, to encourage research on primary and secondary cancer prevention. The Cancer Prevention Program’s team spans a wide range of disciplines, and consists of 30 faculty members from 10 departments and three schools.

The chemoprevention aspect of the program involves pharmacologic intervention at the earliest stages of cancer, as well as before it presents in healthy individuals who are at high risk for certain cancers. Their research is focused primarily on discovering chemoprevention agents (such as genistein) for breast, prostate, skin, ovarian, and colorectal cancers.

Bergan emphasizes the importance of a comprehensive approach to developing strategies for a healthier life. He cites a virtual personal coaching program developed by Bonnie Spring that can be downloaded to a PDA as an example of a tool with potential for positive impact. “Chemoprevention and behavior modification go hand-in-hand,” he says.

Bergan lives with his wife, Gail, and their three children in the Chicago neighborhood of Edgewater, where they all take advantage of their proximity to bike paths and the beach!