Elizabeth Eklund, MD, Professor of Medicine at Northwestern University Feinberg School of Medicine, joined the family business, so to speak, when she became a physician-scientist. Her first cousin, twice removed, the late Warren Weaver, PhD, who once headed the Division of Natural Sciences at the Rockefeller Foundation, played a historic role in the scientific world. Shares Eklund, “He was the first person to coin the term ‘molecular biology’ in the scientific literature. An advocate for science, he felt that this new discipline or category of science [at the time], should be created and supported.”

Too young to become acquainted with her much older cousin Warren, Eklund nurtured her interests in the STEM (science, technology, engineering, and mathematics) fields thanks to her community. She grew up in Downers Grove, Illinois, the daughter of an Argonne National Laboratory IBM computer contractor father and artist mother. She says, “Argonne was nearby and like many of the ‘Argonne kids,’ I was exposed to science, engineering, and computer science at an early age because of our parents’ work.”

Clinically Attuned
Eklund set her sights on medicine and clinical research. She first earned a bachelor’s degree in chemical engineering at the University of Illinois at Champaign-Urbana before going on to medical school at Rush Medical College in Chicago. Although completing her family
practice training in 1986, she realized prior to graduation that she really was most interested in caring for cancer patients. “The outcomes for these individuals greatly depend on the experience and carefulness of their physicians,” says Eklund. “I was very impressed by the ability of hematology/oncology specialists to pull patients back from the brink in oftentimes desperate situations.”

So Eklund shifted gears to become a hematologist/oncologist and as soon as she finished one residency, she started another in internal medicine (required for the subspecialty) at the Mayo Clinic. Then at Indiana University in Indianapolis, she completed a fellowship in hematology/oncology in 1991 and finally a postdoctoral fellowship in molecular hematology in 1993. Her family medicine background, however, wasn’t all for naught. It has given her a broader perspective in an area of medicine where many patients, sadly, still succumb to their disease.

“Initially trained as a primary care physician, I appreciate the importance of not leaving patients and their families in the lurch when they aren’t responding to cancer treatment or ‘failed’ chemotherapy, as if it was somehow their fault,” explains Eklund. “It’s also provided me with a good understanding of knowing when we’ve exhausted all we can do. Sometimes in this specialty, it’s difficult to give up even when it might be in the best interests of the patient.”

**Current Research**

Advancing current treatment options for leukemia, Eklund focuses on investigating the molecular biology of leukemogenesis. Specifically, she has been working on identifying translational targets for novel therapeutic approaches for chronic myeloid leukemia (CML) and acute myeloid leukemia (AML).

Currently tyrosine-kinase inhibitors (TKI) are the first-line treatment for CML. While TKI therapeutics work wonders by increasing survival, they often can’t eliminate every leukemia stem cell. “These cells hide out in the bone marrow and resist normal cell death signals,” explains Eklund, who leads the Lurie Cancer Center’s Hematologic Malignancies Program. “So if you stop treatment, many patients often relapse.” Eklund and her colleagues hope to target these “sneaky” stem cells further downstream from TKI therapy. They’ve identified a promising peptide that they are now developing for therapeutic use.

Patients with AML usually receive high doses of chemotherapy to treat their cancer. Toxic and frequently not well tolerated, this current standard of care can result in remission for some people but generally most will relapse over time. Investigators believe, once again, that AML stem cells may be avoiding detection in the bone marrow and fibroblast growth factors (FGF) may also stimulate their growth.

Eklund has served as Chief of Hematology/Oncology for the Jesse Brown VA Medical Center since 2006. In the mid-1990s, she began her association with the Veteran’s Administration when she received her first VA grant as a junior faculty member at the University of Alabama in Birmingham. For Eklund, caring for the VA patient population provides a nice contrast to Northwestern’s Streeterville environment. She says, “The VA is particularly good for exposing our fellows to patients from different socio-economic classes. Also, because we don’t have to worry about whether our patients have insurance, we can focus on delivering the best care that we can.”

In addition to her research lab on campus, Eklund also maintains one at Jesse Brown.

Living in downtown Chicago, Eklund avails herself of all the city has to offer especially when it comes to cultural arts. She often spends her leisure time going to the theatre and museums.