



A SCIENTIST *who*

Illustrations by Caitlin Elliott

ST Dreamed

BY TOMMY NEWTON

DR. GENE SHEARER IS CONSIDERED TO BE AN OUTSTANDING SCIENTIST, A SUPERSTAR OF IMMUNOLOGY, AND A MAN WHO HAS MODIFIED THE FACE OF AIDS RESEARCH.

DR. SHEARER HAS WORKED AT THE NATIONAL CANCER INSTITUTE, PART OF THE NATIONAL INSTITUTES OF HEALTH (NIH), SINCE 1972 AND HAS BEEN A SENIOR INVESTIGATOR IN THE EXPERIMENTAL IMMUNOLOGY BRANCH. SINCE THE MID-1980s, HIS RESEARCH HAS FOCUSED ON AIDS/HIV AND HE HAS BECOME ONE OF THE MOST-CITED AIDS RESEARCHERS.

However, none of this would have happened if Dr. Shearer had not taken advantage of a second chance at college offered to him at Western Kentucky University. "I have a long history of going to school," he said. "Western is a very important part of my career."

After graduating from Wayne County High School in 1955, Shearer spent one year at Berea College then three more years at the University of Cincinnati in pursuit of an engineering degree. As his grades suffered, he dropped out of college. Subsequently, his father contacted Western Registrar Dero Downing, a family friend.



Dr. Gene Shearer (61)

Dr. Downing reviewed Shearer's transcript and allowed him to enter Western but placed him on academic probation for a year. That second chance, and the

fact that both his parents and several other family members were Western graduates, was all it took for Shearer to excel. In two years, he received his bachelor's degree in biology and chemistry with a minor in mathematics.

"If I had not been able to come to Western, I would never have earned a bachelor's degree," Dr. Shearer said. "Lots of other schools wouldn't have taken me, but Western did."

After leaving Western, Dr. Shearer entered graduate school at the University of Tennessee and received his doctorate in 1967. He also worked at the Oak Ridge National Laboratory, and then completed postdoctoral training at Roswell Park Memorial Institute in Buffalo, New York, and the Weizmann Institute of Science in Rehovoth, Israel. In 1972, he joined the NIH.

"I like to tell people that this is the only full-time job I've ever had,"

Dr. Shearer said of his career at the National Cancer Institute. While his research has evolved over the years, the focus has remained on immunology — or "the science that tries to understand how we fight bacteria, how we fight viruses and how we fight cancer," Shearer explained.

In 1983 and '84, Dr. Shearer became interested in AIDS/HIV, a then-new disease that was attacking the body's defense system and making national headlines. "What we're essentially doing now and have been for twenty-five years is trying to understand what makes the system fail," he said.

This research has proven to be exciting and challenging. "When we started, we didn't know what was causing it," he said. And, in those early days, Dr. Shearer often considered dropping the project but realized it was too important to abandon. His research interests focus on cellular immunology and analyses of protective mechanisms against HIV infection and immune dysregulation seen in AIDS and autoimmune disease.

Dr. Shearer and his research team have recently developed immunologic mechanistic models which contribute to the loss of the T cells that protect against infections, including the HIV virus that causes AIDS. "We're still a long way from having all the answers," he said.

And Dr. Shearer may not be around the NIH to find all the answers. Dr. Shearer, seventy, plans to retire in January or February 2008. "Right now

I'm at a high point of our work and I'd like to go out on the top of my game," he said.

Shearer has authored or co-authored more than 430 medical periodicals, research papers, or books since 1964, and has served on the editorial boards of two scientific journals. His NIH honors include an NIH Director's Award, a Technology Transfer Award, and a cash award for twenty-five years of service on various National Cancer Institute animal committees. He was appointed to the Senior Biomedical Research Service in 1998.

In retirement, Shearer hopes to spend more time with his three grandchildren but he also expects to work as a consultant and/or adviser for other researchers or possibly as a Scientist Emeritus at the NIH. "I have trained approximately fifty young people from all over the world during the years," he said of the doctoral students, postdoctoral fellows, and other research colleagues. "I get a lot of enjoyment from my scientific children and grandchildren."

Dr. Shearer also encourages students interested in scientific research to follow their dreams. He mused, "I've been very fortunate because I didn't really have those dreams, but they came true anyway." ■



President Ransdell presents Dr. Shearer with a plaque at his induction into the 1999 Hall of Distinguished Alumni.