Chemotherapy Drug Offers Hope For Hairy Cell Leukemia

Brigham Young University

Hairy cell leukemia represents about two percent of all forms of leukemia, typically affecting men and women between the ages of 40 and 70. Most patients are white males over 40.

> *Men are four to five times more likely to be affected by this form of leukemia than women.*

Its name stems from the fact that it is characterized by abnormal white blood cells that appear to have hair-like projections when examined under a microscope. It is a chronic lymphocytic leukemia (CLL), which means it is a form of leukemia that involves the production of too many lymphocytes — white blood cells that are vital to the body's defenses. Symptoms of the disease include increased fatigue, infections and swelling of the spleen.

Yet help for those suffering from hairy cell leukemia eventually came from researchers at Brigham Young University (BYU). In the early 1960s, a graduate student named Morris J. Robins was the first person to make cladribine, a drug which interferes with the growth and spread of cancer cells associated with hairy cell leukemia. In the 1980s, Robins' second cousin, Roland K. Robins, along with fellow BYU researcher Ray Revankar, developed an improved method of making cladribine. The Scripps Research Institute also played a key role in the development of cladribine, performing

clinical trials using funding from the National Institutes of Health.

Yet the success story of cladribine is far from over.

In 2006, Morris J. Robins, now a distinguished chemistry professor at BYU, took cladribine a step further improving the method and lowering the cost associated with manufacturing it.

Additionally, the FDA has granted fast-track status to a European pharmaceutical company to test an oral version of cladribine for the treatment of multiple sclerosis.

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