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JULY 1, 1976 CONTACT: Ann Williams

******Leukemia Society of America Scholar will work on improved tests for leukemia patients.*

DALLAS--Dr. Graham Smith, assistant professor of internal medicine at The University of Texas Health Science Center at Dallas, begins work this month on an improved method of assessing the condition of leukemia and lymphoma patients.

The method will subgroup patients for a more individualized treatment for their particular form of disease.

Having been named one of the eight Leukemia Society of America Scholars this year, Dr. Smith will work under a five-year $100,000 salary grant from the society.

A society scholar is a highly qualified individual who has demonstrated ability to conduct scientific research bearing on leukemia, according to society standards.

Dr. Smith will attempt to purify certain protein "markers" found in the malignant cells of leukemia and lymphoma (cancer of the lymph tissue), but not found in normal mature cells. After he has purified the "markers," he will develop specific biochemical and immunologic assay techniques for them. The measure of these proteins hopefully will assess a patient's condition more precisely than techniques now in use.

Dr. Smith said after some patients respond well to treatment, drugs are stopped. Then while some patients continue to do well, others have a sudden recurrence of the malignancy with some dying.

Dr. Smith said much work has been done in protein "markers" in animals, but not much is known about "markers" in humans.

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first add smith leukemia grant

The malignant cells that occur in the blood of some childhood leukemia patients contain an enzyme that occurs normally only in the thymus or in small quantities in immature cells in the bone marrow. The malignant cells have no mature functional abilities, so it is thought that the cells have undergone some malignant change instead of differentiating normally into mature cells.

Dr. Smith's project will involve a complicated procedure of immunizing animals with certain malignant cells from childhood leukemia patients. The animal will produce antibodies for that particular cell. The antibody for the "marker" being studied will be separated from the other antibodies. After it has been purified, its specific assay can be developed.

"This whole process takes years to complete," Dr. Smith said. He will concentrate on three known "markers" in acute lymphocytic leukemia. He said his goals at the end of his five-year grant are "to have assays for these three protein 'markers,' and to know if they are useful in following patients clinically."

Eighty per cent of childhood leukemia patients suffer from the type of leukemia that he will be investigating.

A significant by-product of his research will be additional basic knowledge about the differentiation of normal cells.

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