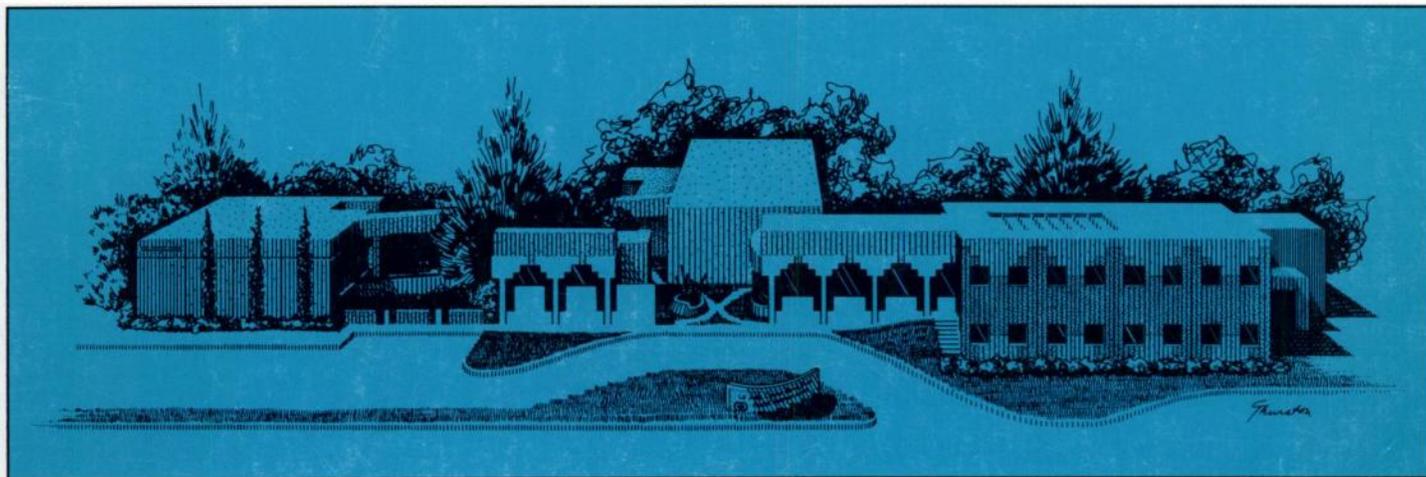
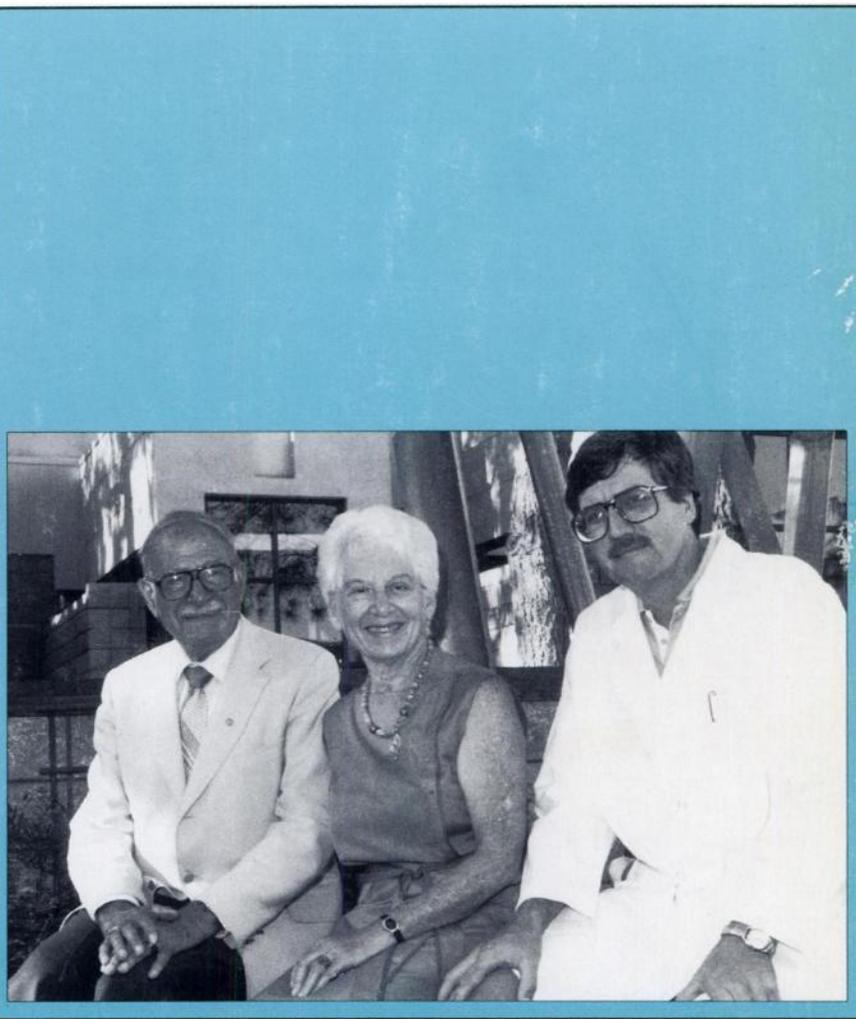
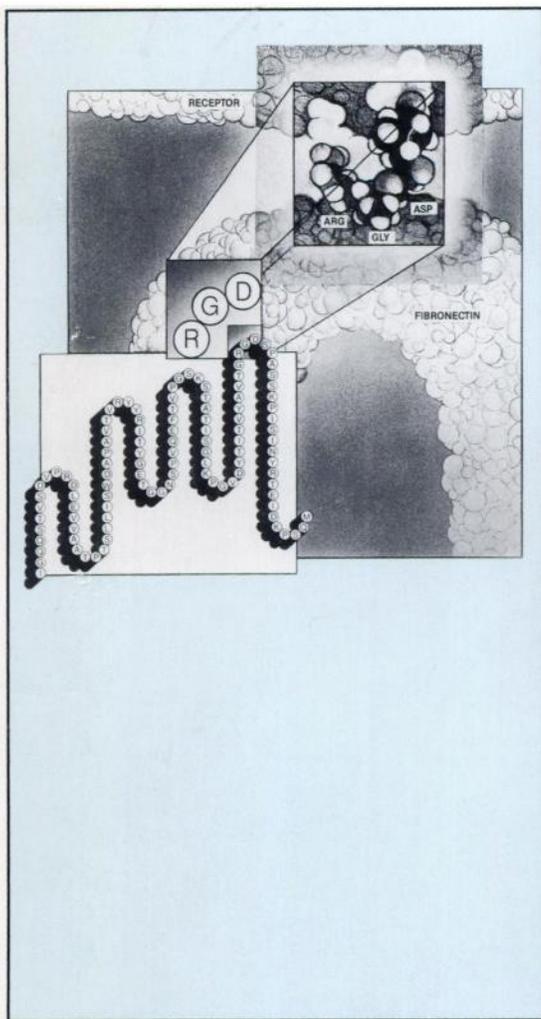




# Cancer Research

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August 1, 1987



**WILMOT  
CANCER RESEARCH FELLOWSHIPS**

The University of Rochester School of Medicine offers research training to physicians who have completed at least one year of residency or research experience. Fellowships will begin July 1, 1988. Opportunities exist in any discipline relevant to the cause, diagnosis, treatment, or prevention of cancer, including endocrinology, experimental therapeutics, genetics, hematology, immunology, microbiology, molecular and cellular biology, pathology, and radiation oncology.

Beginning stipends range from \$32,000 to \$34,000, based on postgraduate experience. There is an annual allowance of \$5,000 for related research costs. Support is provided for up to three years.

For further information, contact:

**WILMOT  
CANCER RESEARCH FELLOWSHIP PROGRAM**  
Medical Center Box 601  
University of Rochester  
School of Medicine & Dentistry  
601 Elmwood Avenue  
Rochester, New York USA 14642

**March 21-25, 1988.**

**6th International Meeting of  
Chemical Modifiers of  
Cancer Treatment, Paris, France.**

**Dr E. P. Malaise  
Laboratoire de Radiobiologie Cellulaire  
(Unité Inserm 247)  
Institut Gustave-Roussy  
94805 Villejuif Cédex  
France.**

This space contributed as a public service.

**\$500,000,000 OF RESEARCH  
HELPED CLIFF SHAW  
PLAY BASEBALL AT AGE 85.**

In November 1973, Cliff Shaw was stricken with cancer.

Fortunately, it was detected early enough. And with surgery, Cliff was able to continue living a healthy, active life.

There was a time when such a diagnosis was virtually hopeless.

But today, cancer is being beaten. Over the years, we've spent \$500,000,000 in research. And we've made great strides against many forms of cancer.

With early detection and treatment, the survival rate for colon and rectal cancer can be as high as 75%. Hodgkin's disease, as high as 74%. Breast cancer, as high as 90%.

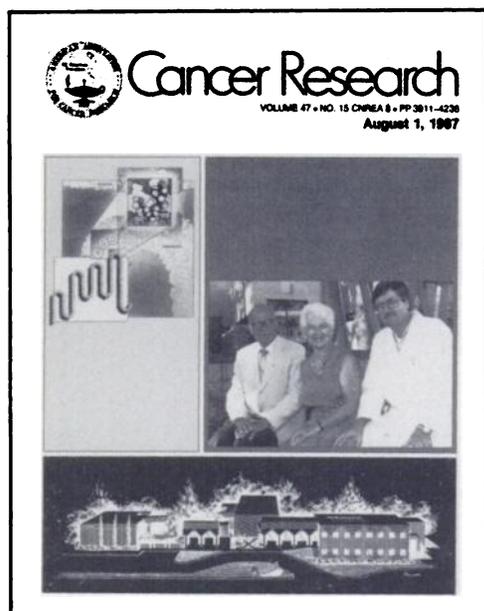
Today, one out of two people who get cancer gets well. It's a whole new ball game.



**AMERICAN CANCER SOCIETY**  
Help us keep winning.

# COVER LEGEND

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The La Jolla Cancer Research Foundation was established in 1976 by Dr. William H. Fishman. His own discovery of placental alkaline phosphatase as a tumor marker, as well as findings by others on the appearance of embryonal proteins in cancer tumors, led Fishman to believe that such "oncodevelopmental" links were likely to hold a key to the understanding of cancer. Research at the new Foundation was to focus on such problems.

From its modest beginnings 10 years ago, the Foundation has grown to a center with 20 research groups, 120 employees, and a \$7 million annual budget. It operates as an independent, nonprofit organization funded by government grants and private contributions. Since 1981 the Foundation has held a Cancer Center Support ("Core") Grant along with a designa-

tion as one of the Basic Science Cancer Centers from the National Cancer Institute.

The research carried out at the Foundation includes studies on gene regulation, the role of oncogenes in development, and cell-extracellular matrix interactions. The work on extracellular matrices has led to the discovery of a cellular recognition system that is based on a three-amino acid sequence present in many extracellular matrix proteins. This sequence, Arg-Gly-Asp, was first identified as the cellular recognition site of fibronectin, an adhesive extracellular matrix protein, and has subsequently been shown to be the cell attachment site of numerous other adhesive proteins, including vitronectin, fibrinogen, von Willebrand factor, and collagens. These proteins are recognized by a family of receptors that have slightly different specificities toward the Arg-Gly-Asp sequence, dependent, it seems, on the conformation of the Arg-Gly-Asp sequence in the individual adhesive proteins (Ruoslahti and Pierschbacher, *Cell*, 44: 517-518, 1986). This recognition system may deliver many of the signals that determine the position of cells in the body. Malignant cells frequently do not deposit extracellular matrix around themselves as normal cells do, suggesting that escape from the influence of the positional control system is one of the steps in tumor progression.

Pictured are: Dr. William H. Fishman (*left*), founder and President of La Jolla Cancer Research Foundation, with Lillian Fishman (*center*), cofounder, and Dr. Erkki Ruoslahti (*right*), Vice President and Scientific Director, in front of the Richard B. Huntington Library of the Foundation. Also shown are the La Jolla Cancer Research Foundation facility and schematic representation of the portion of the cell attachment domain of fibronectin (*lower left*) that contains the Arg-Gly-Asp (RGD) cell attachment sequence and hypothetical model of how the Arg-Gly-Asp may be shaped to fit into a fibronectin receptor of a cell (*upper right*).