

1996 ANNUAL REPORT

*Solutions Through Science*

NATIONAL FOUNDATION FOR CANCER RESEARCH





THE NATIONAL FOUNDATION FOR CANCER RESEARCH WAS

FOUNDED IN 1973 TO SUPPORT BASIC SCIENCE CANCER

## **MISSION STATEMENT** RESEARCH AT THE MOLECULAR AND SUBMOL-

ECULAR LEVELS. WE BELIEVE THE SOLUTION TO THE CANCER

PROBLEM LIES IN SUPPORTING THE BEST IDEAS OF THE BEST

MINDS, USING THE SKILLS OF MANY SCIENTIFIC DISCIPLINES.

BY ENCOURAGING AND FACILITATING COLLABORATION AND

THE SHARING OF IDEAS AND RESULTS AMONG OUR PROJECT

DIRECTORS, ADVANCES IN ONE FIELD CONTRIBUTE TO

PROGRESS IN ANOTHER. WE CALL THIS OUR "LABORATORY

WITHOUT WALLS."

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*Cover: Shigeru Nakai, MD, Assistant Professor of Otolaryngology, Kyoto Prefectural University of Medicine in Japan, and a visiting scholar in the laboratory of NFCR Project Director, Esther Chang, Ph.D., at the Lombardi Cancer Center of Georgetown University.*

**PRESIDENT'S MESSAGE**

The National Foundation for Cancer Research is dedicated to stopping cancer in our lifetime by finding the cure and prevention of cancer. NFCR continues to play a pivotal role supporting research which links multiple disciplines so we might discover and understand what cancer really is. This is how cancer will be cured.

NFCR's mission is to find a cure for cancer by supporting basic-science cancer research. This is what we do. But what does this mean? It is important that you know how NFCR spends your donations.



It is important to understand that a body is built of cells, and a cell is a very complex and subtle chemical mechanism. A cancer cell is a cell which is out of order. The object of cancer research is to repair the disturbed mechanism, or to eliminate it without damaging the patient. And in order to do this we have to discover how cells are built and how they work. This is basic-science research. In basic-science cancer research there are no shortcuts.

Historically, cancer research has been greatly hindered by trying to cure cancer before understanding it. Too many have forgotten that we can control only what we understand. This is the role of basic science research.

Where shall we look for the disorder? On the molecular or the submolecular level? Our cells are built of molecules, and molecules are built of still smaller particles, electrons and atomic nuclei. Molecules are ten thousand times smaller than the smallest thing humans can see, and electrons and nuclei are ten thousand or a million times smaller than molecules.

Present biology is a molecular biology which has stopped at the molecular level. We must go further into a new, mysterious submolecular world where the unknown is expressed in the mathematical language of quantum mechanics. This is basic-science research; this is the type of cancer research NFCR is supporting.

So while most stop at the molecular level, there is no reason for Nature to stop there and avoid using the subtle reactions of the submolecular level in shaping the wonderful gift we call "Life". NFCR is supporting scientists who are experimenting in the submolecular level hoping to help in the solution of cancer.

Breakthroughs in cancer research don't appear overnight; NFCR shares a long-term vision with our scientists that greatly increases the chance that a significant breakthrough will emerge. It is hard to predict how science is going to turn out, yet each scientist whom NFCR supports has a mission to keep following the leads that appear most promising. NFCR's basic-science cancer research program sets a solid foundation for future breakthroughs.

Basic research points the way for the development of improved strategies for the diagnosis, treatment, prevention, and even cure of cancer.

Too often, however, new ideas are opposed by the mainstream. A discovery is a discovery because it is at variance with accepted knowledge, and is sometimes rejected by those who are comfortable with accepted knowledge. After twenty-four years of funding basic-science research, many of the discoveries which were made possible by NFCR now form the basis of contemporary scientific research. Still, additional research is needed to continue the search for the exact submolecular mechanisms of cancer.

Since 1973 NFCR has spent over 150 million dollars to fund cutting edge basic science cancer research at 109 universities and research hospitals in 18 countries around the world. This report will give you a better idea of the very real and very important difference NFCR is making to cure this disease.

In closing, NFCR does not receive any government funding whatsoever; it is with heartfelt thanks to our concerned donors who make NFCR's basic science cancer research program possible that I share with you the success NFCR scientists have achieved this past year.

A handwritten signature in dark ink that reads "Frank C. Salisbury". The signature is written in a cursive, flowing style.

Franklin C. Salisbury  
President



**WAYNE A. MARASCO, MD, PHD**

NFCR Project Director Wayne Marasco, a physician and molecular biologist at Harvard and the Dana-Farber Cancer Institute, has designed and genetically engineered an antibody that, for the first time, can attack the human T cell leukemia virus inside an infected cell.

This breakthrough has turned the immunology world inside out—or in this case, outside in. Dr. Marasco's NFCR research raises the possibility of using antibodies within cells to block the growth of viruses or harmful proteins, such as the oncoproteins whose activity contributes to the uncontrolled growth of cancer cells.

Viruses—like the HTLV-1 virus which causes adult T cell leukemia—use cells as factories in which they can produce more viruses. Once inside the cell, these viruses take over the cell's DNA—the blueprint where all the instructions for life are stored—and then release their own genetic instructions causing the malignant spread of leukemic T cells.

This infection is deadly, for once inside the cell, viruses like the HTLV-1 virus are shielded from our body's immune system: our disease-fighting antibodies normally cannot get inside cells.

Normally, the human immune system produces antibodies to combat infectious substances that enter the body. These antibodies work in the blood stream where they bind to infectious agents such as viruses and clear them from our bodies. What Dr. Marasco has done is found a way to get special antibodies inside the infected cells so they can then cripple the leukemia virus.

Dr. Marasco had to find a way to get disease fighting antibodies inside the infected cells. This took years of research, but Dr. Marasco developed a detailed, molecule-by-molecule understanding of how to design and assemble intracellular antibodies which he calls "intrabodies." These intrabodies are a new class of therapeutic molecules for gene therapy which selectively bind with and inactivate molecules inside malignant cells. These intrabodies cripple the leukemic cells without having any adverse effects on healthy cells.

This important cancer breakthrough, and the ability to engineer intracellular antibodies to work within cells, has far reaching implications for fighting cancer and other infectious diseases like AIDS caused by the HIV virus. This is another example of how basic-science cancer research is where any new treatments or therapies for cancer will start. Dr. Marasco's research may well set the foundation for human gene therapy against adult T cell leukemia and AIDS.



*NFCR Project Director Wayne*

*Marasco, a physician and molecular*

*biologist at Harvard and the Dana-*

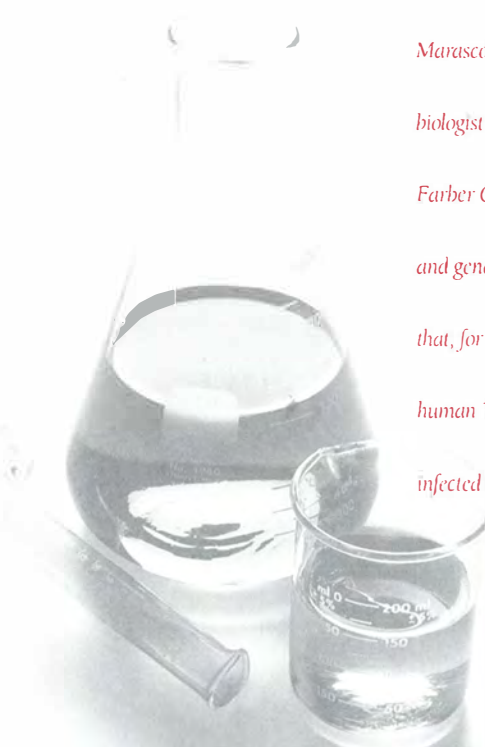
*Farber Cancer Institute, has designed*

*and genetically engineered an antibody*

*that, for the first time, can attack the*

*human T cell leukemia virus inside an*

*infected cell.*



## RESEARCH FOR A CURE

Since 1973, the National Foundation for Cancer Research has provided over 150 million dollars for basic science research to distinguished scientists representing 135 research projects in twenty countries. We are proud that seven NFCR supported scientists have been awarded Nobel Prizes, including the 1989 Nobel Prize in Chemistry. The groundbreaking research has been possible because of the support from individual donors for our scientific program.

Our current scientific program is unsurpassed. Working in NFCR's Laboratory Without Walls, NFCR Project Directors listed here are at the forefront of the research world. We are confident that the cure for cancer will be found in these laboratories.

### JACQUELINE BARTON, PH.D.

*California Institute of Technology  
Pasadena, California*

"Recognition of DNA Sites with Metal Complexes"

Regulation of gene expression by designing peptides to recognize and interact with specific segments of DNA.

### FREDERICK F. BECKER, M.D.

*University of Texas  
M.D. Anderson Cancer Center  
Houston, Texas*

"Cell surface alterations in cancer control"

Identification of electrical charge differences in the membranes of cancer and normal cells may result in new and more effective cancer therapies.

### STEPHEN J. BENKOVIC, PH.D.

*Pennsylvania State University  
University Park, Pennsylvania*

"Enzymes in Nucleotide Biosynthesis and DNA Replication"

Studying the role of specific enzymes in the production of DNA and RNA.

### ESTHER H. CHANG, PH.D.

*Stanford University  
Stanford, California*

"Modulation of the radiation-resistant phenotype of tumor cells by sequence-specific antisense oligonucleotides"

Investigating the molecular basis of tumors being resistant to radiation therapy.

### YUNG-CHI CHENG, PH.D.

*Yale University  
New Haven, Connecticut*

"Pleiotropic Drug Resistance-DNA Exonuclease"

The recent discovery of a new DNA (genetic) repair enzyme may result in new treatments to prevent resistance of cancer cells to anticancer drugs.

### DONALD M. ENGELMAN, PH.D.

*Yale University  
New Haven, Connecticut*

"Receptor interactions within membrane bilayers"

This study of cancer cell membrane functions will lead to new and more effective anticancer therapies.

### IVAR GIAEVER, PH.D.,

**NOBEL LAUREATE**  
*Rensselaer Polytechnic Institute  
Troy, New York*

"Cell Substrate Interaction"

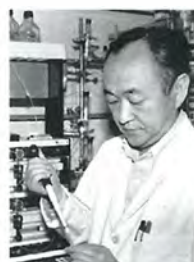
Studying the interaction of normal and cancer cells and why cancer cells spread and move about the body. Developed an "electrified petri dish" which lets them monitor the slightest motions.



Jacqueline Barton, Ph.D



Esther H. Chang, Ph.D



Yung-Chi Cheng, Ph.D



Ivar Giaever, Ph.D

### HECTOR F. DELUCA, PH.D.

*University of Wisconsin-Madison  
Madison, Wisconsin*

"Vitamin D analogs as anti-leukemia agents/biochemical basis of chemical carcinogenesis"

Creating non-toxic forms of Vitamin D for treatment of leukemia and other cancers.

### PETER B. DERVAN, PH.D.

*California Institute of Technology  
Pasadena, California*

"Studies on protein-DNA recognition"

Investigation of the chemical basis for the specificity of protein binding to DNA.

### HAROLD F. DVORAK, M.D.

*Beth Israel Hospital  
Boston, Massachusetts*

"Tumor secreted mediators and the tumor microenvironment"

Demonstrated that solid tumors need a grid (collagen, blood, fibrin) to spread and grow.

### CSABA HORVATH, PH.D.

*Yale University  
New Haven, Connecticut*

"High-resolution separation of glycoconjugates"

High performance liquid chromatography is a new and novel technology which may result in new laboratory tests of earlier detection and therefore higher cure rates for many cancers.

### KATHRYN HORWITZ, PH.D.

*University of Colorado  
Denver, Colorado*

"The molecular biology of progesterone action in breast cancer"

Learning how female hormones influence the growth of some cancers will result in new laboratory tests for earlier detection and higher cure rates for breast cancer.

**KEITH U. INGOLD, PH.D.**

*Biological Antioxidant Research Fund  
Ottawa, Canada*

"Antioxidants in normal and in tumor tissues"

Understanding how the antioxidant vitamins C, E, and beta-carotene are used by the body will advance knowledge on how some cancers may be prevented.

**SIR AARON KLUG, PH.D.,**

**NOBEL LAUREATE**

*MRC Laboratory of Molecular Biology  
Cambridge, England*

"The role of chromosome translocations in development of human leukemia"

Examining how oncogene activation causes tumor development and ways to inhibit their action.

**THOMAS C. MERIGAN, M.D.**

*Stanford University School of Medicine  
Stanford, California*

"Studies of the immuno-pathogenesis of AIDS related lymphoma"

Analyzing immunologic changes at different stages of the disease which may determine which AIDS patients may also get lymphoma.

**CESAR MILSTEIN, PH.D.,**

**NOBEL LAUREATE**

*Medical Research Council  
Cambridge, England*

"Site-directed modification of genes of the immune system"

Using gene targeting techniques to develop transgenic mice with genetic mutations suspected of causing human T-cell leukemia.

**ILYA PRIGOGINE, D.E.S.,**

**NOBEL LAUREATE**

*University of Texas  
Austin Texas*

*Instituts Internationaux de  
Physique et de Chimie Solvay  
Brussels, Belgium*

"Theoretical and experimental study of tissue growth and immune system regulation"

Studies on how the surface of tumors affects the cellular immune response to cancer cells.

**MANFRED F. RAJEWSKY, M.D.**

*University of Essen*

*Essen, Germany*

"Chemically-induced tumorigenic conversion of cells in the developing nervous system; structural DNA modifications and repair, and early cell lineage-specific gene alterations"

The detection of specific gene mutations in brain tumors offers new hope for the development of more effective therapies for these difficult to treat cancers.

**W. GRAHAM RICHARDS, D.SC.**

*Oxford University*

*Oxford, England*

"Design of anticancer drugs"

Computer graphics now permits the molecular modeling and design of powerful new anticancer drugs which will destroy tumor cells without harming other normal tissue cells.

**ROBERT D. ROSENBERG, M.D.,  
PH.D.**

*Beth Israel Hospital*

*Boston, Massachusetts*

"The role of heparin markers in the regulation of cell growth"

The recent discovery of specialized tissue cells which produce heparin-like substances which inhibit or slow tumor cell growth may result in new strategies for treating cancers.

**LEONARD ROSENTHAL, PH.D.**

*Georgetown University*

*Washington, D.C.*

"Herpesviruses (HCMV and HHV-6) and their association with AIDS and malignant disease"

Defining the role of herpesviruses HHV-6 and HCMV as co-factors in the progression of AIDS and its association with Kaposi's sarcoma.

**JANOS LADIK, PH.D.**

*Universitat Erlangen-Nurnberg  
Erlangen, Germany*

"Quantum mechanical investigation of the electronic structure of proteins and DNA and their interactions, the effect of chemical carcinogens on the activation of oncogenes"

**WAYNE A. MARASCO, M.D., PH.D.**

*Dana-Farber Cancer Institute*

*Boston, Massachusetts*

"Mechanism of transformation of human lymphocytes by the HTLV-1 Virus"

Studying the mechanism by which the human T-cell leukemia virus (a retrovirus) transforms human lymphocytes. If successful this work may lead to the first gene therapy to treat adult T-cell leukemia.

**GARTH L. NICOLSON, PH.D.**

*University of Texas M.D. Anderson  
Cancer Center*

*Houston, Texas*

"Cancer invasion and metastasis-associated heparanase"

This project is developing tumor specific chemical markers which will result in new laboratory tests for early identification of tumors which are prone to spread.

**RONALD PETHIG, D.SC.**

*University of Wales*

*Bangor, Gwynedd, Wales*

"Dielectric and electrochemical properties of cell membranes"

A newly developed optical technique makes it possible to measure and compare the electrical charge differences between cancer and normal cells, which could result in more effective strategies for new cancer therapies.



*Sir Aaron Klug, PhD*

*Cesar Milstein, PhD*

*Ronald Pethig, DSc*

*W. Graham Richards, DSc*



**LEO SACHS, PH.D.**

Weizmann Institute of Science  
Rehovot, Israel

"The reversibility of malignant cell transformation"

The laboratory's discovery that natural proteins called colony stimulating and maturation factors regulate the growth of white blood cells and can cause blood cancer cells to become normal suggests new approaches to cancer treatment.

**RAMASWAMY SARMA, PH.D.**

State University of New York at Albany  
Albany, New York

"Structure and Dynamics DNA-Drug Complexes"

Using innovative magnetic resonance imaging technology to study the shape of DNA (genetic) molecules will enhance the development of new and more effective anticancer drugs.

**ALANNA SCHEPARTZ, PH.D.**

Yale University  
New Haven, Connecticut

"Non-natural metalloregulated, AP-1 site-specific DNA binding peptides"

Developing a new class of anti-sense molecules to control gene expression and inhibit genes that either control or cause cancer.

**HAROLD A. SCHERAGA, PH.D.**

Cornell University  
Ithaca, New York

"Molecular recognition"

Investigating the structure and function of growth factors using molecular modeling and NMR analysis. Has solved the 3-D structure of epidermal growth factor.

**PAUL SCHIMMEL, PH.D.**

Massachusetts Institute of Technology  
Cambridge, Massachusetts

"Peptide Motifs for RNA Interactions"

This project is focused on the investigation of peptide elements which interact with RNA motifs used in decoding of genetic information.

**PRAVINKUMAR SEHGAL, M.D., PH.D.**

New York Medical College  
Valhalla, NY

"Interleukin-6 in cancer"

Showed Interleukin-6 and Interferon B-2 to be the same and is conducting a small clinical trial of Interleukin-6 that is showing promise.

**HELMUT SIES, M.D.**

Universitat Dusseldorf  
Dusseldorf, Germany

"Biological significance of peroxidation reactions"

From this study additional information will be obtained on how certain antioxidant nutrients (Vitamin E, betacarotene) may prevent certain cancers.

**JEFFREY L. SKLAR, M.D., PH.D.**

Brigham and Women's Hospital  
Boston, Massachusetts

"Molecular genetic analysis of tumor spread in malignant gliomas of the brain"

Determining pattern of spread in brain tumors by tracing genetic mutations from the primary tumor.

**I. BERNARD WEINSTEIN, M.D.**

Columbia University  
New York, New York

"Carcinogens, oncogenes, and human cancer causation"

Studying the cellular and molecular mechanisms by which chemicals in the environment and our diet cause cancer.

**DANNY R. WELCH, PH.D.**

Pennsylvania State University College of Medicine  
Hershey, Pennsylvania

"Hormonal regulation of breast cancer metastasis"

Identified the presence of genes that suppress the ability of breast cancer cells to metastasize. Evaluating how these genes are regulated by hormones and how these genes work.



Leo Sachs, PhD



P. Sehgal, MD, PhD



Daniel D. Von Hoff, MD



I. Bernard Weinstein, MD

**MARTYN SMITH, PH.D.**

University of California, Berkeley  
Berkeley, California

"Anti-sense manipulation of genes involved in leukemia and other cancers"

Like a guided missile of smart bombs, anti-sense drugs can be designated to home in and destroy specific cancer causing genes. This concept could introduce revolutionary new cancer treatments.

**DANIEL D. VON HOFF, M.D.**

University of Texas Health Science Center  
San Antonio, Texas

"Intermediates in gene amplification"

Discovered that extra chromosomal genetic material (episomes) can make tumors drug resistant and that hydroxyurea can destroy the episomes.

**HAROLD F. DVORAK, MD**

Despite recent advances, current cancer therapies—surgery, radiation, and chemotherapy—fail to cure many of the most important human cancers such as breast cancer. Reasons for failure are many. Some tumors cannot be removed surgically because of their location. Also, many cancerous tumors have already spread by the time of diagnosis; therefore, although the primary tumor can be removed, the cancer may have spread to other parts of the body. Radiation is often helpful for the treatment of localized tumors, but radiation is not generally useful for metastatic disease. Finally, chemotherapy, while useful as an adjunct, in many cases does not cure. Even if radiation and chemotherapy were more effective against tumors, there are severe side effects when used at levels that are necessary to kill tumor cells.

Dr. Dvorak's NFCR project, funded since 1980 at Harvard's Beth Israel Deaconess Medical Center in Boston, is aimed at identifying alternative approaches to cancer therapy through basic research. The idea has been to understand tumor biology, fundamental tumor behavior, and to find steps by which cancer growth and spread could be halted.

It is well known that cancers kill patients by growing in size, invading adjacent normal tissues, and spreading (metastasizing) to distant parts of the body. Once having spread to distant sites, they form new islands of tumor and repeat the cycle of growth, invasion, and metastasis until the patient dies.

There are critical steps which, if blocked, would prevent tumors from growing and hence from invading and spreading. One such step is

*Dr. Harold Dvorak, Mallinckrodt Professor of Pathology,*

*Harvard Medical School and Chairman of the Department of Pathology*

*at Beth Israel Deaconess Medical Center in Boston*

angiogenesis, the generation of new blood vessels. Breast cancers and indeed all tumors, like normal tissues of the body, require a blood supply to grow. If tumors do not continually acquire an additional blood supply, they could not metastasize and, therefore, would cause no harm.

Dr. Dvorak's research has been aimed at understanding the process by which tumors acquire new blood vessels. If scientists could stop this process they could prevent tumor growth and metastasis. Supported by NFCR for more than 16 years, Dr. Dvorak and his colleagues have discovered, purified, and identified what is now widely believed to be the key molecule in this process, the so-called vascular permeability factor (VPF), also known as vascular endothelial growth factor (VEGF).

Why is this important? It is important because among the proteins that leak from affected blood vessels is the plasma protein fibrinogen, the blood clotting protein. Once fibrinogen escapes from blood vessels, it interacts with tissue factors that cause clotting.

This seemingly insignificant event is extremely important. Normally adult human tissues are in balance (homeostasis) with regard to their blood supply; this balance discourages the growth of new blood vessels. But the leaking of fibrin outside of blood vessels changes all this.

This is the basis of wound healing. A newly formed clot is largely comprised of fibrin which encourages the development of new blood vessels which are necessary for healing.

Dr. Dvorak has discovered that cancerous tumors are able to turn on this healing mechanism for their own purposes. Cancerous tumors make and secrete VPF/VEGF that causes blood



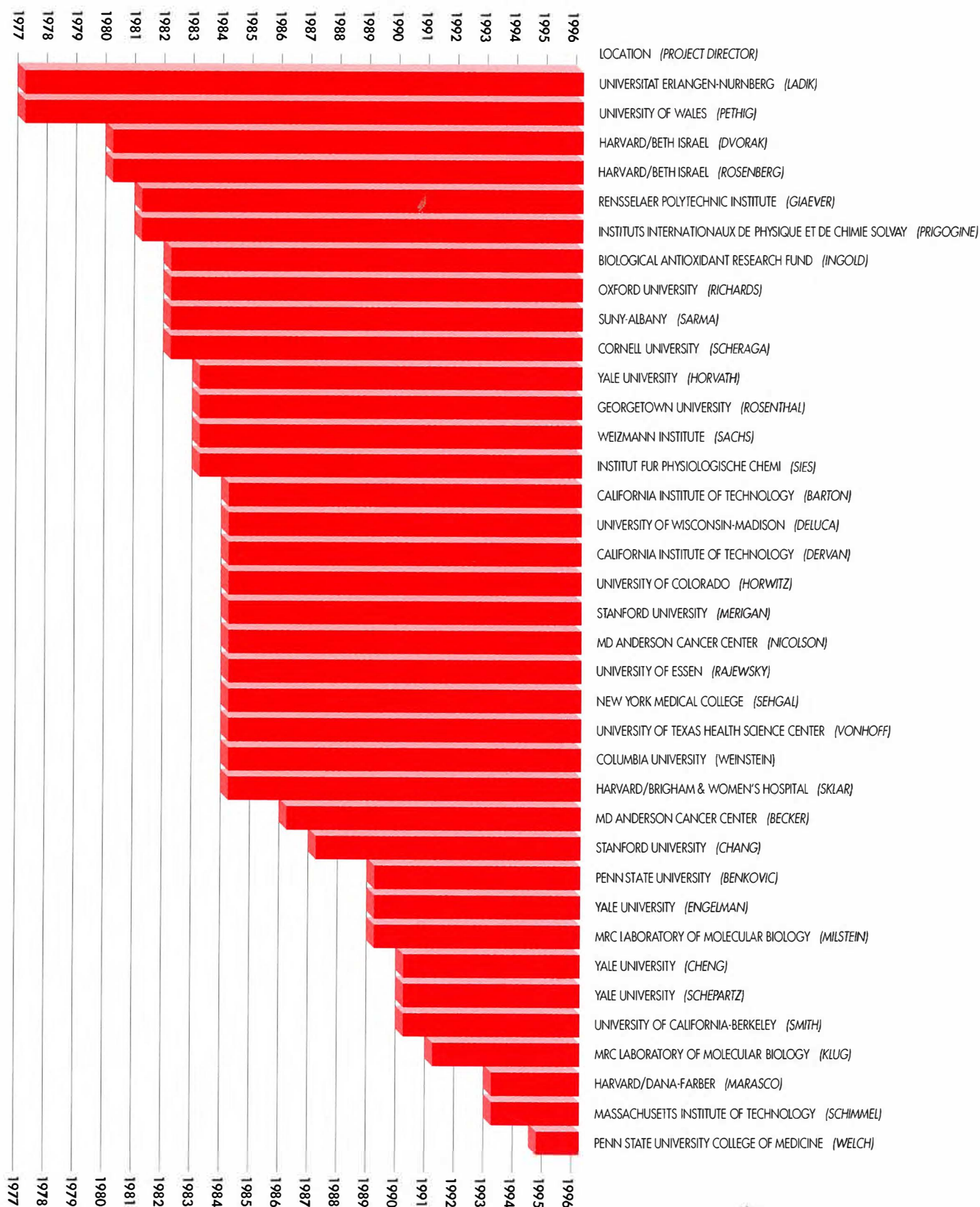
vessels to leak plasma fibrinogen which forms blood clots. This in turn encourages and supports the growth of new blood vessels which the tumor needs to grow.

However, tumors differ from healing wounds in one important respect. As soon as a wound is healed VPF/VEGF production is turned off abruptly. Tumors, however, continue to make large amounts of VPF/VEGF and in essence keep the body's wound mechanism in the "on" position.

Cancerous tumors continue to make VPF/VEGF because they are growing rapidly and need a new blood supply. Dr. Dvorak's NFCR research has revealed that most important human cancers overproduce VPF/VEGF. This is a major factor in breast cancer for breast cells overproduce VPF/VEGF even before they become cancerous. Thus, preventing VPF/VEGF overproduction would arrest breast cancer before it could endanger women by invading or metastasizing.



## PROJECTS LONGEVITY



## THE INSTITUTIONS

### UNITED STATES

#### ALABAMA

Southern Research Institute,  
Birmingham  
University of Alabama at Birmingham

#### CALIFORNIA

California Institute of Technology,  
Pasadena  
The Salk Institute for Biological Studies,  
San Diego  
Stanford University, Stanford  
University of California, Berkeley  
University of California, San Diego  
University of California, San Francisco

#### COLORADO

University of Colorado, Boulder  
University of Colorado Health Sciences  
Center, Denver

#### CONNECTICUT

Yale University, New Haven

#### DISTRICT OF COLUMBIA

American University, Washington  
Georgetown University, Washington  
National Bureau of Standards,  
Washington

#### FLORIDA

Florida State University, Tallahassee  
University of Florida, Gainesville  
University of Miami, Coral Gables

#### ILLINOIS

Northwestern University, Evanston  
University of Illinois, Urbana

#### KENTUCKY

University of Kentucky, Lexington

#### LOUISIANA

Louisiana State University, Baton Rouge  
University of New Orleans, New  
Orleans

#### MARYLAND

Henry M. Jackson Foundation, Bethesda  
Johns Hopkins University, Baltimore  
National Institutes of Health, Bethesda  
Uniformed Services University of the  
Health Sciences, Bethesda

#### MASSACHUSETTS

Beth Israel Hospital, Harvard Medical  
School, Boston  
BioSurface Technology, Inc., Cambridge  
Dana-Farber Cancer Institute, Harvard  
Medical School, Boston  
Marine Biological Laboratory, Woods  
Hole  
New England Medical Center, Boston  
Sidney-Farber Cancer Institute,  
Harvard Medical School, Boston  
Tufts University School of Medicine,  
Boston

#### NEW HAMPSHIRE

Dartmouth College, Hanover

#### NEW YORK

City College of City University, New  
York City  
Cold Spring Harbor Laboratory, Cold  
Spring Harbor  
Cornell University, Ithaca  
Columbia University, New York City  
Down State Medical Center, New York  
City  
General Electric Company, Schenectady  
IBM Corporation, Kingston  
Hofstra University, Hempstead  
New York Medical College, Valhalla  
New York University, New York City  
Rensselaer Polytechnic Institute, Troy  
The Rockefeller University, New York  
City  
Roswell Park Memorial Institute,  
Buffalo  
State University of New York, Albany  
W. Alton Jones Cell Science Center,  
Lake Placid

#### OKLAHOMA

Oklahoma State University, Stillwater

#### PENNSYLVANIA

Carnegie-Mellon University, Pittsburgh  
Fox Chase Cancer Center, Philadelphia  
Hahnemann University, Philadelphia  
Medical College of Pennsylvania  
Philadelphia  
Pennsylvania State University, Hershey  
Pennsylvania State University,  
University Park  
Temple University, Philadelphia  
University of Pittsburgh, Pittsburgh

#### TENNESSEE

University of Tennessee, Memphis

#### TEXAS

Baylor College of Medicine, Houston  
Cancer Therapy and Research Center of  
South Texas, San Antonio  
Texas A&M University, College Station  
The University of Texas Health Science  
Center, San Antonio  
The University of Texas, M.D. Anderson  
Hospital and Cancer Institute,  
Houston

#### VIRGINIA

Virginia Commonwealth University,  
Richmond  
College of William and Mary,  
Williamsburg

#### WASHINGTON

Fred Hutchinson Cancer Center, Seattle

#### WEST VIRGINIA

West Virginia University, Morgantown

#### WISCONSIN

Institute of Paper Chemistry, Appleton  
Medical College of Wisconsin,  
Milwaukee  
University of Wisconsin-Madison,  
Madison  
University of Wisconsin-Milwaukee,  
Milwaukee

### INTERNATIONAL

#### AUSTRALIA

University of Sydney, Sydney

#### AUSTRIA

Universitat fur Graz, Graz

#### BELGIUM

Instituts Internationaux de Physique et  
de Chemie Solvay, Brussels

#### CANADA

Biological Antioxidant Research Fund,  
Ottawa  
National Research Council, Ottawa  
University of Alberta, Edmonton  
University of Montreal, Montreal  
University of Waterloo, Waterloo



## ENGLAND

Brunel University, Uxbridge  
Medical Research Council, Cambridge  
Medical Research Council, London  
Oxford University, Oxford  
University College School of Medicine,  
London  
University of Leicester, Leicester

## FRANCE

Institut de Biologie Physico-Chimique,  
Paris

## GERMANY

Free University of Berlin, Berlin  
Hahn-Meitner Institut für  
Kernforschung, Berlin  
Institut für Physiologische Chemie I,  
Düsseldorf  
Krebsforschung International, e.V.,  
Düsseldorf  
Max-Planck Institut für  
Biophysikalische, Göttingen  
Universität Düsseldorf, Düsseldorf  
Universität Erlangen-Nürnberg,  
Erlangen  
Universität Essen, Essen

## HUNGARY

Debrecen University, Debrecen

## IRELAND

Our Lady of Lourdes, Int'l  
Missionary Tr. Hospital, Drogheda  
Royal College of Surgeons, Dublin  
St. Laurence's Hospital, Dublin

## ISRAEL

Israel Institute for Biological Research,  
Ness-Ziona  
The Weizmann Institute of Science,  
Rehovot

## ITALY

Università di Genova, Genova  
Università di Siena, Siena  
Università di Torino, Torino

## JAPAN

Jichi Medical School, Tochigi-Ken  
Osaka University, Osaka  
Technology University of Nagaoka,  
Nagaoka

## POLAND

Jagiellonian University, Krakow

## SCOTLAND

University of St. Andrews, St. Andrews  
Vale of Leven Hospital, Alexandria

## SWEDEN

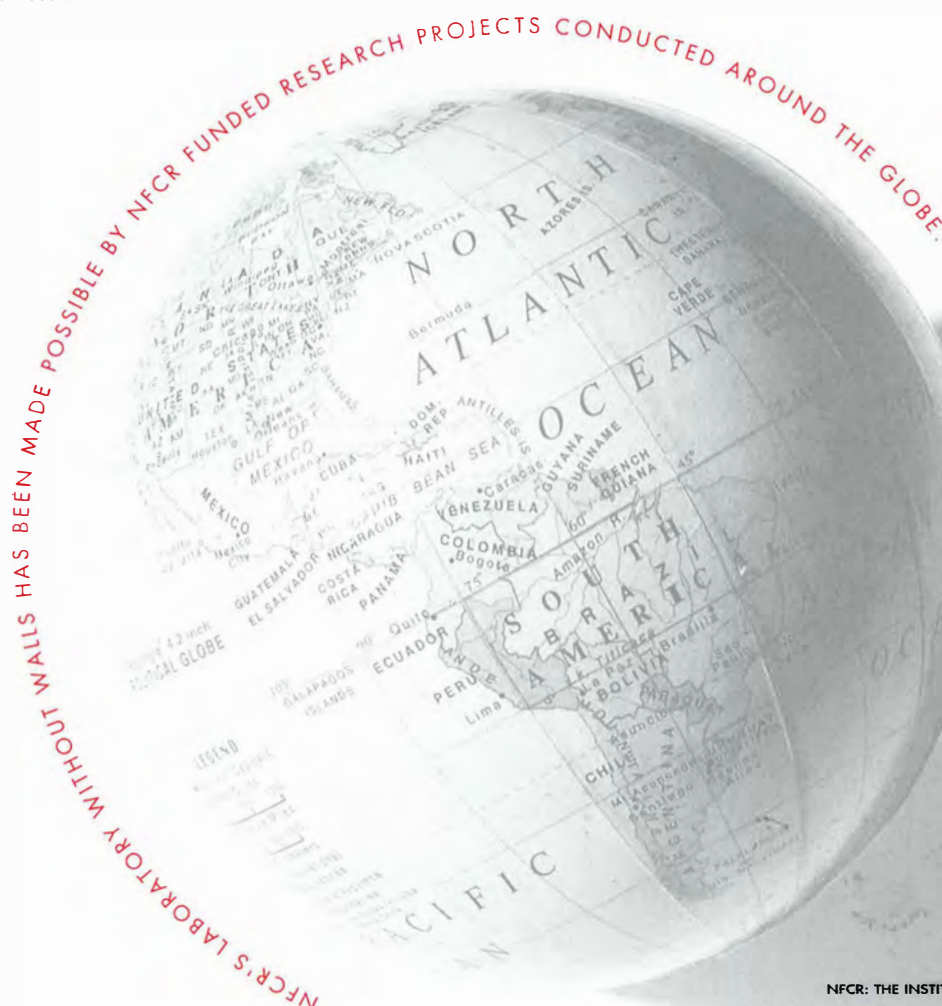
University of Stockholm, Stockholm  
Uppsala University, Uppsala

## SWITZERLAND

Institute for Integrative Biomedical  
Research, Zurich  
Molecular Design International, Geneva

## WALES

University College of North Wales,  
Bangor



## PUBLIC EDUCATION

The National Foundation for Cancer Research strongly believes that through its public education program, individuals can be provided with the most up-to-date information on detection, prevention and treatment. The knowledge that an estimated 35% of all cancer deaths could be prevented by using this information increases our urgency.

We receive requests for nutritional and illness prevention information from just about everybody—individuals, health professionals and public health educators.

People want to be able to help steer their own course for good health. NFCR is excited about being part of this increasing trend in personal health responsibility. Gone are the days when people falsely believed that they could mistreat their bodies and then just present themselves to a doctor and expect to be fixed. NFCR welcomes this trend (although we feel we were pioneers of it) and believes that the benefits will be better quality of health and life for everyone.

NFCR tries to provide the latest in cancer prevention and early detection in an inviting and informative format. We direct people to other cancer resources or ways of finding additional information when applicable. We try to empower individuals to the critical importance of their own questions, input and choices in achieving maximum quality of life and health for themselves.

## NEWSLETTER

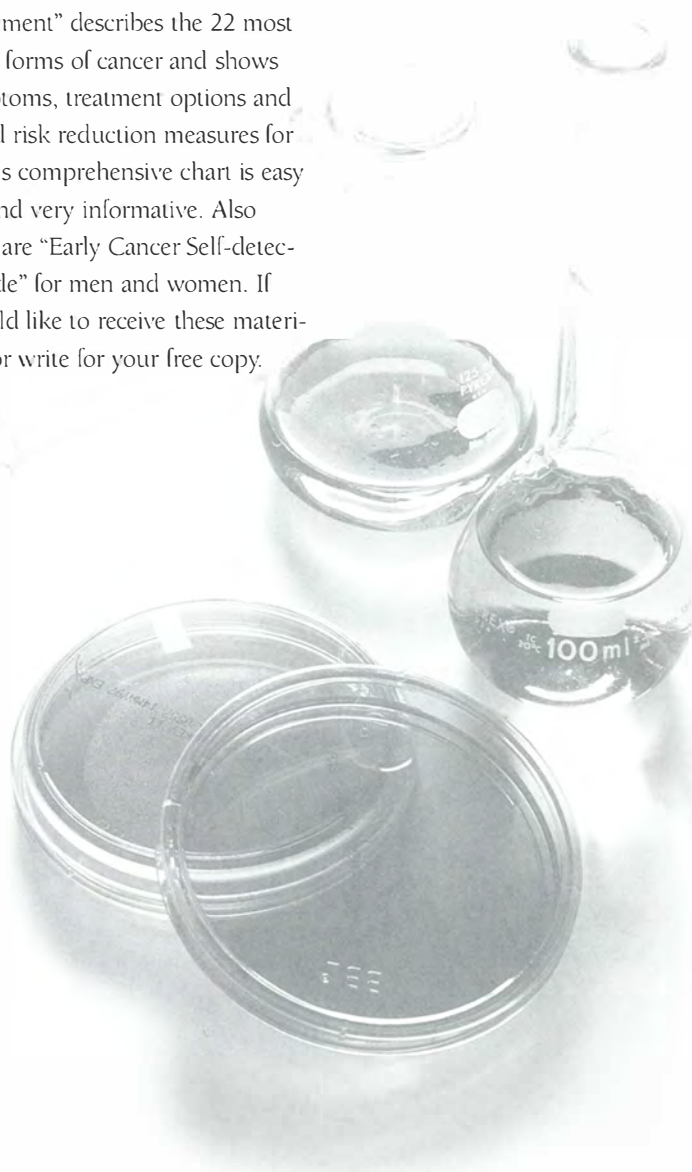
NFCR's newsletter is *Solutions Through Science*. It was designed to give donors and friends information about the latest in cancer research. Short, readable pieces in laymen's language summarize scientific findings and their significance to the general public.

## OUR MEMBERS ASK...

Our newest brochures with the latest information on cancer research discoveries and treatments which may be vital to your health. Brochures are available on the subjects of breast, lung, prostate and colo-rectal cancer. Call for your copies.

## CANCER CHART

Our chart, "Prevention, Detection and Treatment" describes the 22 most common forms of cancer and shows the symptoms, treatment options and suggested risk reduction measures for each. This comprehensive chart is easy to read and very informative. Also available are "Early Cancer Self-detection Guide" for men and women. If you would like to receive these materials, call or write for your free copy.





## ON YOUR HEALTH

We are in complete agreement with the National Cancer Institute on the importance of eating a healthy diet with lots of fiber and green and yellow vegetables and fruits. NFCR scientists were among the pioneers of antioxidant research — that's the underpinning for the theory which explains why vegetables are good for you. Basically, Vitamins C, E, and Betacarotene (pre-Vitamin A) all contain antioxidants which neutralize the oxygen free radicals found in the air we breathe — especially if it's loaded with cigarette smoke or other pollutants. And remember, some pollutants you may be completely unaware of — like radon.

NFCR has a series of free information on diet and lifestyle changes which could help you to help yourself protect against cancer.

Please request any of the following titles in the "On Your Health" series:

- *Consider the Carrot – and Betacarotene*
- *Weigh Less – Live Longer*
- *Choose Crucifers*
- *Seek Shade, not Sun*
- *Find Fiber*
- *Get the Facts on Fats*
- *Walk for Fitness*
- *Track the Trace Minerals*
- *Breathe Easier – Reduce Radon*
- *Have a Healthy, Happy Holiday*
- *Cancer Detection*

## HEALTH FAIRS

We welcome the opportunity to send information on detection and prevention of cancer to be distributed at health fairs and other public events. Please call in advance to discuss the appropriate materials for your event.

**CALL US AT 1-800-321-CURE**

*To request free copies of the materials described here please call or write to:*

*National Foundation for Cancer Research,*

*7315 Wisconsin Avenue, Suite 500W, Bethesda, MD 20814*

## SPECIAL EVENTS

### THIRD ANNUAL VINCENT RUGNETTA MEMORIAL CONCERT

Singer Al Martino and comedian Henny Youngman headlined this successful benefit concert held on November 18, 1995. Music director Doug Talbert conducted the Joe Pastor Big Band Orchestra at the Count Basie Theatre in Red Bank, New Jersey. Each year, this concert is hosted by Tony Rugnetta to honor his father Vincent Rugnetta and to support basic science cancer research conducted by NFCR. Vincent Rugnetta tragically died of lung cancer and his family believes that the cure for cancer will come from basic-science research.

### MUSIC PLANT

A benefit hosted by Vibe and the Music Plant in Chicago raised money to support the basic-science cancer research conducted in NFCR's Laboratory Without Walls. The benefit hosts agree with us that the solution to cancer lies in science; and that by supporting the best ideas of the best minds across many scientific disciplines, the solution will be found.

### FIRST ANNUAL HERB GESSER MEMORIAL GOLF TOURNAMENT

One hundred and thirty two golfers participated in this July 15, 1996 tournament. Held in honor of Herb Gesser, who tragically died of cancer, nearly 200 supporters participated in the days events at the Inwood Country Club in Inwood, NY. All proceeds from this event were designated specifically to the work of NFCR Project Director I. Bernard Weinstein, M.D. at Columbia University in New York.

## CHARITABLE GIVING

Your charitable generosity can be rewarding in many ways. Your gifts may even offer you substantial tax advantages.

Even though personal economic benefit may not be a prime motivation behind your gift to NFCR, you may want to consider charitable giving strategies which provide financial benefits to you as well as the causes you support.

Federal tax laws encourage charitable giving by allowing you to deduct the value for such donations from your income taxes. The income tax deduction allows you to deduct the value of the gift, up to 30% of your adjusted gross income for appreciated property, or up to 50% of your adjusted gross income for a gift of cash. If you exceed your deductibility limit in any one year, you may carry over the balance of the deduction for up to five additional years.

There are many different ways to give charitable gifts. You can contribute an outright gift, a gift that produces income for you, a bequest in your will, or a gift of life insurance—just to name a few. You'll find a donation envelope enclosed with this annual report.

The National Foundation for Cancer Research depends on contributions in all forms. We hope you will embrace our mission of supporting basic-science cancer research and contribute to NFCR in one of many ways. Let's look more closely at some types of gifts that will produce benefits for both you and NFCR. Please call for free literature on any of these giving options.

## PLANNED GIVING

Planned giving simply means your plan for giving. The arrangements you make, the beneficiaries you name, and the timing you choose are the components of your plan for giving. During your life, and after you're gone, a well-conceived plan distributes what you have worked hard to accumulate, in the manner you have chosen, and with minimal delay and erosion by taxation.

### *Wills and bequests*

This is the most easily understood gift. The donor includes a bequest in his/her will leaving a gift to NFCR. This can be either a fixed sum; a fixed percentage; or a specifically named gift (X shares of Y stock, or certain real estate, for example).

*A will is the cornerstone of your plan for the future. With a provision in your will for NFCR, you can make a significant investment in a healthy future for your loved ones. Here is sample language which you might use to remember NFCR in your will.*

*"I give, devise and bequeath to the National Foundation for Cancer Research, a charitable organization incorporated in the state of Maryland, with its principal office at 7315 Wisconsin Avenue, Bethesda, MD \$ \_\_\_\_\_ (or \_\_\_\_\_% of my estate) to be used for NFCR's basic science cancer research program."*

*Although the process is simple, you should seek the advice of your attorney to see that your will or codicil is effectively drafted.*

### *Bequests Received FY 1996*

Barbara Atkins  
John Bell  
Gizella Broadfoot  
Lucile Burk  
Fred Canevari  
Aleda Cathcart  
Elsie Christiani  
Maybelle Dillon  
Ruth Eldred  
Shirley Engel  
Ann Eskin  
Harriet B. Filmer  
Beverly Fineman  
Marge B. Gabriel  
Cecil Ganyard  
Drusilla Gjoerloff  
Mary Christy Gordon  
Halleene Haxthausen  
John G. Hicks  
Evelyn Hotz  
Doris Jackson

Oscar Lane  
Gertrude Lantier  
Thelma MacTavish  
Floyd R. Mattix  
Patricia Maxwell  
Jane Notaro  
Mary O'Neil  
Renee Reaume  
Clayre Ribner  
Lois Parker Schipul  
William Sharpe  
John L. Simpson  
Edward L. Smith  
Angeline Stelmasczuk  
Irene Tsechinskaya  
Irene Twamley  
Myron Walker  
Addie Willard  
L. Wilson  
Robert S. Wright



## Life Income Gifts

**CHARITABLE GIFT ANNUITY.** Did you know that you could make an investment that would fund basic science cancer research and pay you an income for life and give you tax benefits? It's called a charitable gift annuity (CGA). A CGA is an irrevocable gift to the National Foundation for Cancer Research; NFCR contracts with the donor to provide a fixed lifetime income.

Benefits include:

- leaving a legacy to fund basic science cancer research;
- an immediate charitable deduction at the time of the gift on a portion of the gift value;
- a portion of the annuity payments will be tax-free; if the annuity is funded with appreciated property (securities for example) only a portion of the gain is reportable.
- guaranteed flow of payments without market risk;
- these annuities can be set up so that a second person receives a life income after the death of the primary beneficiary;
- payments can be deferred until a future date, like retirement, while the charitable deduction is taken in the year of the gift. It is also possible to make gifts in successive years, taking the deductions each year, and deferring payments until the future: an excellent strategy to take the write-offs in high income years, deferring the income until retirement.

The interest rate paid on CGAs is based upon the age of the recipient, on whether there are one or two beneficiaries, and whether payments are immediate or deferred. Payments are made quarterly or annually to the donor. The interest rates are determined by the American Council on Gift Annuities. Highest rates are paid to older individuals and to individuals opting to defer payment for a number of years.

### CGA Illustration

*A donor has a maturing \$10,000 Certificate of Deposit (non-IRA); and she would like to make a gift of this money to NFCR in exchange for lifetime annuity. For this illustration we will assume the donor is 58 years old today and will retire in 2004 when she is 65. She would like to make the gift this year and defer payments until the year she retires.*

Amount of gift	\$10,000.00
Charitable Deduction 1997	5,263.50
Annuity Rate	10.2 %
Annual Annuity Payment begins 2004	1,020.00
Tax free portion	235.62
Ordinary income	784.38

*After 20.1 years from when the payments begin, the entire annuity becomes ordinary income. (figures are approximate).*

### Charitable Remainder Trusts

There are several variations of these trusts. In essence these are instruments into which a donor can place assets during his lifetime to provide specific benefits for the donor and leave a legacy to charity.

A charitable remainder trust must be structured either as an annuity trust or a unitrust. An annuity trust pays a fixed annual income (out of trust income, and principal if necessary) of at least 5% of the fair market value of the assets initially placed in trust. A unitrust pays a fixed percentage of the fair market value of the trust assets, revalued annually.

- The donor may take a considerable charitable deduction in the year of the gift (variations are based on the nature and size of the gift, the income level of the donor and other things). The trust is then its own entity and no longer a part of the donor's estate for probate purposes.

- With some variation, the trust has two tasks: first to pay an income for life (or a set term not longer than 20 years) to the designated beneficiary (typically the donor and spouse), and then to distribute the assets to charity. This way the donor lets the assets earn for him and generate an income, and when the time comes, support the charity of his choice.

### Other Creative Gifts

**LIFE INSURANCE.** Often overlooked as a funding asset, life insurance provides a variety of giving opportunities, both outright and deferred.

- A paid up policy may be assigned irrevocably to NFCR;
- NFCR may be named as primary, secondary or contingent beneficiary, but donor retains ownership of the policy;
- The dividends of a participating policy may be assigned to NFCR;
- The death benefits or cash value of policy can be used to fund a life income gift annuity or trust for a surviving spouse or other beneficiary.

**CHARITABLE LEAD TRUST.** This trust is the opposite of a charitable remainder trust: NFCR would receive and income for a specified number of years and then the principal would return to whomever holds the reversionary interest. The primary use is to enable wealthy donors to reduce the estate tax burden of property transfers to family members.

*Did you know that statistics from probate courts nationwide indicate that nearly 90% of Americans die without a will?*

## MEMORIAL/HONOR GIFTS

### *A Tribute To Someone Special*

All of us know someone special whom we have admired, respected and loved. We invite you to celebrate that special person's life with a donation made in his or her honor to the National Foundation for Cancer Research. Or perhaps you would like to send a memorial contribution instead of sending flowers at the death of a loved one. This is really a gift "so others might live"—for it goes to support life-saving cancer research. A handsome card is sent to the honoree, or in the case of a memorial gift, an "In Memory of" card is sent to the family, with the name of the donor.

We receive so many individual gifts of this kind that space limitations do not permit listing all the honorees. But we are grateful for them all.

Please call us (1-800-321-CURE) for any information about designating NFCR as the recipient of honorary or memorial gifts in the name of someone special to you.

## OTHER WAYS TO GIVE

### *Corporate Matching Gifts*

Many companies provide Workplace Matching Gift Programs to their employees, retirees, and directors. To all who participate in these we extend our most sincere thanks. The following businesses and foundations have generously matched, doubled, and even tripled the contributions made to NFCR. In addition there are many other companies who do this—if you are not sure of your employer's policy—please ask.

## 1996 MATCHING GIFT COMPANIES

Adobe Systems, Inc.	McDonnell Douglas Foundation
Allegro MicroSystems, Inc.	McMaster-Carr Supply Company
Allendale Insurance Foundation	Microsoft
ALZA Corporation	Mitsubishi Trust
American Express	Mobil Foundation
AON Foundation	MidAmerica Energy Company
ARCO Foundation	MMI Companies, Inc.
BP America	MONY
Becton Dickinson and Company	J.P. Morgan & Co., Inc.
Leo Burnett Company, Inc.	Network General Corporation
Chase Manhattan Foundation	OTA Limited Partnership
Chubb Life America	Pella Rolscreen Foundation
Chubb & Son, Inc.	Pfizer
Citibank	Polaroid Foundation
CNA Insurance Companies	Premark International
CPC International, Inc.	QAD, Inc.
Fel-Pro Matching Gifts Program	Rayonier Foundation
Gartner Group	Reader's Digest Foundation
General Re Corporation	Safeguard Business Systems
Gilman Paper Company Foundation	St. Paul Federal Bank
W.W. Grainger, Inc.	Sundstrand Corporation Foundation
Harcourt General	Shaklee Corporation
Hoechst Celanese Corporation	Spear, Leeds & Kellogg
Home Depot	Subaru of America Foundation
Household International	Teleflex Foundation
Illinois Tool Works Foundation	Temple-Inland Foundation
IMC Global Operations, Inc.	Toys "R" Us
John Hancock Mutual Life	Times Mirror Company
Johnson & Johnson	Transamerica Corporation
W.K. Kellogg Foundation	US West Foundation
Kemper National Insurance	Vastar Resources, Inc.
Kennecott Corporation	United Technologies
Lotus	

*\*This information is not intended to be legal advice. Please consult with an attorney or financial advisor to determine which gift arrangement would best meet your needs.*



## THE CODICIL CLUB

These generous individuals have paid NFCR the highest compliment. They have demonstrated their support of our mission by notifying us of their intention to leave a legacy to the National Foundation for Cancer Research. Please contact us if you have remembered NFCR in your estate plans.

Mr. James A. Arling  
Mr. Barkley R. Atkins  
Ms. Lorraine L. Baker  
Mr. Ralph R. Baum  
Mr. Paul E. Bishop  
Ms. Doris M. Boettcher  
Mr. Richard E. Brown  
Hon. Kenneth E. Bruce  
Miss Ella Mae Campbell  
Mr. John Campodonico  
Mr. Stan Clark  
Ms. Lorraine Cloutier  
Mr. and Mrs. Frank R. Cordon  
Mrs. Bernard Cork  
Mrs. Henry Corton  
Mrs. Virginia H. Covey  
Ms. Genovefa Curtis  
Mrs. Jane Ann Curto  
Mr. R. Gustav Danielson  
Mrs. Ora K. Dennett  
Mr. Charles T. Detling  
Mr. Howard Devon  
Mr. Lester A. Dobbins  
Ms. Marguerite Ehrlich  
Mrs. Dill Ellis  
Mr. William Ellsworth  
Mrs. Isabelle I. Enyart  
Mrs. Mary Elizabeth Ewing  
Mrs. Maria Falatieu  
Mrs. Eva H. Foster

Mrs. W.C. Fervert  
Miss Eileen C. Frey  
Mr. Edward J. Goldman  
Mr. George Goodberg  
Mrs. Dorothy Goodman  
B. Griminger  
Mr. Alexander Hasse  
Mrs. Beatrice Hasse  
Mrs. Dorothy Hess  
Mr. Larry L. Hile  
Mrs. Cicely E. Hink  
Ms. Holly B. Hyatt  
Mrs. Mickie F. Inman  
Mr. Erwin Jacobsohn  
Mr. John Johann  
Mrs. Judith A. Johnson  
Mrs. Helen M. Keyt  
Mr. Nissim Koen  
Mr. Ferderick W. Langner  
Mr. L.C. Larragoity  
Mr. Hamilton LeViness  
Mrs. Alma Lewis  
Mr. Stephen Lucas  
Mrs. N. Everit Macy  
Ms. Marjorie A. McIntosh  
Ms. Geraldine M. McCreary  
Miss Claire Mellman  
Mrs. Ruth Melnicoff  
Mrs. Jane R. Meyers  
Mr. R. Clifford Metz  
Mr. Arthur Miller  
Mrs. Noble Miller  
Ms. Jane Milne  
Mrs. Eva Mae Mister  
Mrs. Elizabeth M. Mochel

Mrs. Phyllis J. Mowery  
Mrs. Doris Nicholas  
Mr. Clifford A. O'Connell  
Mrs. Clara M. Odom  
Mr. Robert H. Packer  
Col. George A. Phillips  
Mrs. Rose Pilcarsky  
Ms. Libby Radlus  
Ms. Elaine Y. Robinson  
Mrs. Cora Marsh Rogers  
Mrs. Pauline Ross  
Ms. Lucile Ruck  
Dr. Ramaswamy Sarma  
Mrs. Mukti Sarma  
Mr. Roland G. Schaal  
Mrs. Visnja Schaal  
Mr. John W. Scott  
Lt. Col. Harry J. Sessums  
Mr. Lewis Seward  
Mr. Owen S. Smith  
Mrs. Bernadine M. Somervill  
Mrs. L. Blanche Stewart  
Mr. Isaac E. Story  
Mrs. Elvira A. Switzer  
Mrs. Ruth Torgerson  
Mrs. E.C. Trelstad  
Mr. John Turunen  
Ms. Patricia Umenhofer  
Mrs. Verla R. Vancuren  
Mr. Delmer Volmer  
Ms. Joan S. Waldron  
Mrs. Iona B. Walton  
Mr. Marvin L. Weisbein  
Mr. Frank Welch

# STATEMENTS OF FINANCIAL POSITION

## National Foundation for Cancer Research

Years ended September 30, 1996 and 1995

<i>Assets</i>	1996	1995
Cash	\$ 129,617	522,865
Accounts receivable, net of allowance for doubtful accounts of \$5,000 in 1996 and \$10,918 in 1995	149,957	130,352
Contributions receivable (note 4)	729,585	711,630
Supplies inventory	15,928	18,999
Prepaid expenses and other assets	145,916	133,862
Donated asset	29,700	29,700
Fixed assets, net (note 6)	33,115	25,155
Investments (note 5)	3,256,263	2,845,677
Beneficial interest in perpetual trust (note 7)	734,497	681,863
	<u>\$ 5,224,578</u>	<u>5,100,103</u>

## *Liabilities and Net Assets*

### Liabilities:

Accounts payable and other liabilities	\$ 332,360	190,274
Research contracts payable	364,868	352,741
Deferred revenue	31,790	7,516
Capital lease payable	4,367	—
	<u>\$ 2,378,282</u>	<u>2,228,684</u>

### Net assets (note 3):

#### Unrestricted:

Designated for research (note 8)	2,293,375	2,170,492
Undesignated	1,034,366	1,198,262
	<u>\$ 3,327,741</u>	<u>3,368,754</u>

Temporarily restricted	418,955	488,955
Permanently restricted	744,497	691,863

<b>Total net assets</b>	<u>\$ 4,491,193</u>	<u>4,549,572</u>
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Commitments (notes 8 and 12)

	<u>\$5,224,578</u>	<u>5,100,103</u>
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See accompanying notes to financial statements.



# STATEMENTS OF ACTIVITIES

National Foundation for Cancer Research

Years ended September 30, 1996 and 1995

	1996	1995
<i>Support and revenue:</i>		
<b>Support:</b>		
Public support	\$5,462,145	5,703,094
University support (note 6)	1,761,323	2,069,777
<b>Revenue:</b>		
Net investment income (note 5)	166,824	330,442
Other revenue	347,709	222,912
<b>Total support and revenue</b>	<b>7,738,001</b>	<b>8,326,225</b>
Net assets released from restrictions (note 10)	70,000	70,000
<b>Total revenue</b>	<b>7,808,001</b>	<b>8,396,225</b>
<i>Expenses:</i>		
<b>Program services:</b>		
Research (notes 8 and 9)	3,323,153	3,630,368
Public education	1,596,514	1,472,790
<b>Total program services</b>	<b>4,919,667</b>	<b>5,103,158</b>
<b>Supporting services:</b>		
Management and general	412,908	356,027
Fundraising	2,516,439	2,145,455
<b>Total supporting services</b>	<b>2,929,347</b>	<b>2,501,482</b>
<b>Total expenses</b>	<b>7,849,014</b>	<b>7,604,640</b>
Change in unrestricted net assets	(41,013)	791,585
<b>Changes in temporarily restricted net assets:</b>		
Contributions	—	10,215
Net assets released from restrictions (note 10)	(70,000)	(70,000)
Changes in temporarily restricted net assets	(70,000)	(59,785)
<b>Changes in permanently restricted net assets:</b>		
Gain on beneficial interest in perpetual trust (note 7)	52,634	87,902
Change in net assets	(58,379)	819,702
<b>Net assets, beginning of year, as restated (note 2)</b>	<b>4,549,572</b>	<b>3,729,870</b>
<b>Net assets, end of year</b>	<b>\$ 4,491,193</b>	<b>4,549,572</b>

See accompanying notes to financial statements.

## STATEMENTS OF CASH FLOW

National Foundation for Cancer Research  
Years ended September 30, 1996 and 1995

	1996	1995
<i>Cash flows from operating activities:</i>		
Change in net assets	\$ (58,379)	819,702
Adjustments to reconcile changes in net assets to net cash provided by operating activities:		
Depreciation and amortization	9,310	14,464
Increase (decrease) in allowance for doubtful accounts	(5,918)	6,248
Unrealized loss (gain) on sale of investments	2,214	(136,754)
Realized loss (gain) on sale of investments	31,386	(15,757)
Gain on beneficial interest in perpetual trust	(52,634)	(87,902)
Decrease (increase) in assets:		
Accounts receivable	(13,687)	(51,777)
Contributions receivable	(17,955)	32,594
Supplies inventory	3,071	55,035
Prepaid expenses and other assets	(12,054)	7,489
Increase (decrease) in liabilities:		
Accounts payable and other liabilities	142,086	(9,594)
Research contracts payable	12,127	90,306
Deferred revenue	24,274	(5,873)
Net cash provided by operating activities	63,841	718,181
<i>Cash flows from investing activities:</i>		
Purchase of investments	(4,315,809)	(733,276)
Proceeds from sales of investments	3,871,623	377,463
Purchase of fixed assets	(22,239)	(1,859)
Proceeds from sale of fixed assets	4,969	—
Net cash used in investing activities	(461,456)	(357,672)
Cash flows from financing activities-capital lease financing	4,367	—
Net decrease (increase) in cash	(393,248)	360,509
Cash, beginning of year	522,865	162,356
Cash, end of year	\$ 129,617	522,865
<i>Supplemental disclosure of cash flow information:</i>		
Cash paid during the year for interest	\$ 535	96

See accompanying notes to financial statements.



## NOTES TO FINANCIAL STATEMENTS

National Foundation for Cancer Research  
Years ended September 30, 1996 and 1995

### (1) THE ORGANIZATION

National Foundation for Cancer Research, Inc. (the Foundation) was incorporated in Massachusetts in 1973 "to support basic science cancer research projects including the theories of Dr. Albert Szent-Gyorgyi who discovered Vitamin C." The purposes of the Foundation are to conduct basic science cancer research and to provide educational information about cancer to the public. The Foundation also conducts business under the name Cancer Research Laboratories Foundation, Inc.

### (2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The financial statements of the Foundation have been prepared on the accrual basis of accounting.

#### *Basis of Presentation*

The Foundation adopted Statements of Financial Accounting Standards (SFAS) No. 116, *Accounting for Contributions Received and Contributions Made*; SFAS No. 117, *Financial Statements of Not-for-Profit Organizations*; and SFAS No. 124, *Accounting for Certain Investments Held by Not-for-Profit Organizations*. The Foundation has restated its net asset balances as of October 1, 1994, retroactively, to adopt the requirements of SFAS Nos. 116, 117, and 124.

The effect of the restatement as of October 1, 1994, resulted in the following differences between the September 30, 1994, fund balances previously reported and the September 30, 1994, net assets as reported herein.

	Total
Fund balance, as previously reported September 30, 1994	\$ 737,321
Adjustments	
Split-interest agreements	980,781
Contributions previously deferred	367,404
Research contracts previously accrued	1,742,992
Unrealized losses on investments	(98,628)
Net assets, as restated at September 30, 1994	\$3,729,870

These beginning net assets are classified as follows:

	Total
Unrestricted	\$2,577,169
Temporarily restricted	548,740
Permanently restricted	603,961
	\$3,729,870

Under the provisions of SFAS Nos. 116 and 117, net assets and revenues, expenses, gains, and losses are classified based on the existence or absence of donor-imposed restrictions. Accordingly, the net assets of the Foundation and changes therein are classified and reported as follows:  
UNRESTRICTED NET ASSETS—*Net assets that are not subject to donor-imposed stipulations.*

TEMPORARILY RESTRICTED NET ASSETS—*Net assets subject to donor-imposed stipulations that may or will be met either by actions of the Foundation and/or the passage of time.*

PERMANENTLY RESTRICTED NET ASSETS—*Net assets subject to donor-imposed stipulations that they be maintained permanently by the Foundation.*

Revenues are reported as increases in unrestricted net assets unless use of the related assets is limited by donor-imposed restrictions. Expenses are reported as decreases in unrestricted net assets. Gains and losses on investments are reported as increases or decreases in unrestricted net assets unless their use is restricted by explicit donor stipulation or by law. Expirations of temporary restrictions on net assets (i.e., donor-stipulated purpose has been fulfilled and/or stipulated time period has elapsed) are reported as reclassifications between the applicable classes of net assets.

#### *Revenue Recognition*

Public support is recorded as revenue when contributions, which include unconditional promises to give (pledges), are received. The Foundation has adopted a policy of recording as unrestricted donor-restricted contributions whose restrictions are met in the same reporting period.

#### *Donated Asset*

Donated asset consists of real property and is recorded at its estimated fair value at the date of donation based on an appraisal of the land.

#### *Bequests*

The Foundation is the beneficiary under various wills and trust agreements. The Foundation records such amounts when notified that the amounts have cleared probate.

#### *Prepaid Expenses*

Prepaid expenses consist primarily of printing, processing, postage, and list costs incurred prior to September 30 in connection with subsequent fiscal year mailings.



### Fixed Assets

Expenditures for furniture and equipment are capitalized at cost. Furniture and equipment are depreciated on the straight-line basis over the estimated useful lives of the assets of 5 to 10 years.

Leasehold improvements are capitalized at cost and amortized on the straight-line basis over the remaining life of the lease.

### Investments

Investments which are recorded at fair value, consist of government securities with maturities greater than 90 days and money market funds. During fiscal year 1996, the Foundation retroactively adopted SFAS No. 124, *Accounting for Certain Investments Held by Not-for-Profit Organizations*, which resulted in recognition of unrealized gains (losses) of \$(2,214) and \$136,754 for the years ended September 30, 1996 and 1995, respectively, and a decrease to the October 1, 1994, net assets balance of \$98,628.

### Supplies Inventory

Supplies inventory is stated at the lower of cost or market (estimated net realizable value) using the first-in, first-out method.

### Functional Allocation of Expenses

The costs of providing the programs and services are summarized on a functional basis in the accompanying financial statements. Accordingly, certain costs have been allocated between the programs and services benefited. Joint costs of informational materials or activities that included a fundraising appeal have been allocated between fundraising and public education expenses.

### Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amount of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements. The Foundation is also required to make estimates and assumptions that affect reported amounts of revenue and expenses during the reporting period. Actual results may differ from those estimates.

### Income Taxes

The Foundation qualifies as a public charity under Section 509(a) of the Internal Revenue Code and is generally exempt from federal income tax under Section 501(c)(3), except on unrelated business income, if any.

### Reclassifications

Certain reclassifications have been made to the 1995 financial statement balances to conform with the 1996 presentation.

### (3) NET ASSETS

Temporarily restricted net assets at September 30, 1996, are available for the following purposes or periods:

	Total
Specific research programs	\$21,920
Split-interest agreements	397,035
<b>Total temporarily restricted net assets</b>	<b>\$418,955</b>

The investment income earned on the permanently restricted net assets balance of \$744,497 and \$691,863 as of September 30, 1996 and 1995, respectively, is unrestricted for use of the Foundation.

### (4) CONTRIBUTIONS RECEIVABLE

Contributions receivable at September 30, 1996 are expected to be received as follows:

	Total
Within 1 year	\$332,550
Within 1 to 5 years	88,800
Beyond 5 years	308,235
	<b>\$729,585</b>

Contributions receivable within one year represent bequests to the Foundation. Contributions not expected to be received within 1 year represent the Foundation's interest in certain trust agreements held by third parties. The Foundation receives income distributions from the trusts and will receive a percentage of trust assets at the termination of the trusts. The Foundation has recorded a receivable at September 30, 1996 and 1995 equal to its share of the fair value of trust assets as determined by the third parties.



## (5) INVESTMENTS

Investments, at fair value, consisted of the following at September 30:

	1996	1995
Money market funds	\$3,149,639	—
Corporate bonds	—	1,323,145
Government and agency securities	106,624	1,356,875
Stocks	—	165,657
	\$3,256,263	2,845,677

Investment income consisted of the following for the years ended September 30:

	1996	1995
Interest and dividend income	\$200,424	177,931
Net realized gains (loss) on sales of investments	(31,386)	15,757
Unrealized gain (loss)	(2,214)	136,754
	\$166,824	330,442

At the end of 1996, the Foundation transferred all of its investments from United Missouri Bank to Prudential Securities. Prudential subsequently liquidated many of the investments to allocate the proceeds amongst various money managers in order to diversify the investment portfolio. The amount in money market funds are classified as investments because the funds are not available for operating purposes and are intended to be re-invested in investments.

## (6) FIXED ASSETS

Fixed assets as of September 30, 1996 and 1995, are as follows:

	1996	1995
Office Furniture	\$158,552	172,882
Computer equipment	240,360	225,873
Leasehold improvements	2,651	2,651
	401,563	401,406
Less accumulated depreciation and amortization	(368,448)	(376,251)
	\$33,115	25,155

## (7) BENEFICIAL INTEREST IN PERPETUAL TRUST

The Foundation is the beneficiary of several split-interest agreements, including irrevocable perpetual trusts, which are held by third-party trustees. Under perpetual trusts held by a third-party, the donor establishes and funds a trust whereby the Foundation is the beneficiary of the income on the trust assets as earned in perpetuity with no restrictions on its use.

The perpetual trusts are stated at present value based on the expected future cash flows to the Foundation, which approximates the fair value of the assets contributed to the trust. Fair value at September 30, 1996 and 1995 was \$734,497 and \$681,863, respectively. The gain on the beneficial interest in perpetual trusts for the years ended September 30, 1996 and 1995, was \$52,634 and \$87,902, respectively.

## (8) RESEARCH CONTRACTS

The Foundation enters into agreements with universities or other institutions to conduct scientific research on their premises, in accordance with policies established by the governing board of the Foundation. Under the terms of these agreements, the Foundation provides specific funds on an annual basis subject to routine performance requirements by the recipients of the contracts. Research contracts are expensed in the year the research is conducted.

At September 30, 1996 and 1995, contract commitments to universities and institutions for research amounted to \$2,293,375 and \$2,170,492, respectively.

## (9) UNIVERSITY SUPPORT

Research contracts with universities and institutions typically cover much of the research costs; however, most institutions agree to donate certain materials, services, and the use of facilities. These donations, provided by the institutions, become a normal part of the research program and would ordinarily be costs incurred by the Foundation.

Control over these donated materials, services, and facilities is provided through on-location Project Directors, who are responsible to the Foundation for the research project at the institutions.

The effect of these donations is to allow the Foundation to conduct research in excess of the amount of the contract. The institutions provide the Foundation with a measurable basis for the amount of the donated materials, services and facilities. To properly reflect the total research cost and adequately report the full scope of the operation, the Foundation has included the following donations as university support and research expense for the years ended September 30, 1996 and 1995:

	1996	1995
Salaries and staff	\$431,482	475,473
Materials, chemicals and equipment	150,198	183,905
Utilities and occupancy	153,997	216,099
Travel and services	50,083	50,764
Computer services	706,836	919,835
Hospital facilities and lab costs	268,727	223,701
	\$1,761,323	2,069,777

#### (10) RECLASSIFICATION OF NET ASSETS

Net assets of \$70,000 as of September 30, 1996 and 1995 were released from donor restrictions as the Foundation awarded research contracts in accordance with donor stipulations.

#### (11) RETIREMENT PLAN

The Foundation has a defined contribution money purchase plan which covers all full-time employees with at least 1 year of service. The Foundation contributes an amount equal to 12 percent of the participating employees' salaries to the plan each year. For the years ended September 30, 1996 and 1995, contribution expense was approximately \$41,000 and \$50,000, respectively.

#### (12) LEASE COMMITMENTS

The Foundation leases office space under a noncancelable operating lease. Future minimum lease payments under the operating lease as of September 30, 1996, include base rent with a 2 percent CPI increase each year as stipulated by the lease and are as follows:

1997	\$190,345
1998	96,115
	\$288,460

Rent expense for the years ended September 30, 1996 and 1995, was \$168,038 and \$164,833, respectively.

The Foundation also entered into a noncancelable capital lease in 1996 for office equipment. Future minimum lease payments under this lease are due as follows:

1997	\$2,014
1998	1,984
1999	369
	\$4,367

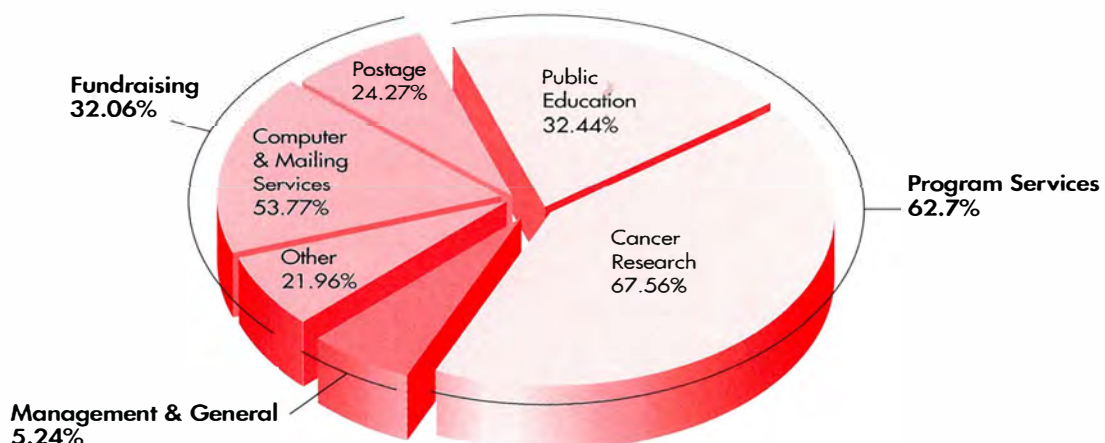
Payments for the year ended September 30, 1996, totaled \$786.

#### (13) ALLOCATION OF JOINT COSTS

For the years ended September 30, 1996 and 1995, the Foundation incurred joint costs of approximately \$3,523,000 and \$2,702,000, respectively, for informational materials and activities that included fundraising appeals which were allocated as follows:

	1996	1995
Fundraising	\$2,205,000	1,514,000
Public education	1,318,000	1,188,000
	\$3,523,000	2,702,000

#### YOUR DOLLARS AT WORK



**INDEPENDENT AUDITORS' REPORT**

Board of Directors

National Foundation for Cancer Research, Inc.:

We have audited the accompanying statements of financial position of the National Foundation for Cancer Research, Inc. (the Foundation) as of September 30, 1996 and 1995, and the related statements of activities and cash flows for the years then ended. These financial statements are the responsibility of the Foundation's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the National Foundation for Cancer Research, Inc. at September 30, 1996 and 1995, and its changes in net assets and its cash flows for the years then ended in conformity with generally accepted accounting principles.

Our audits were made for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplementary information included in the Schedule is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and, in our opinion, is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

As discussed in note 2 to the financial statements, the Foundation adopted the provisions of Statement of Financial Accounting Standards (SFAS) No. 116, *Accounting for Contributions Received and Contributions Made*; SFAS No. 117, *Financial Statements of Not-for-Profit Organizations*; and SFAS No. 124, *Accounting for Certain Investments Held by Not-for-Profit Organizations*.

*KPM& Peat Marwick LLP*

January 10, 1997



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*The National Foundation for Cancer Research was founded in 1973 and incorporated under the laws of the State of Massachusetts. This Foundation is organized pursuant to section 501(c)(3) of the Internal Revenue Code and is registered with and complies with the regulations of the charity divisions in all states in which it solicits donations, including the New York Department of State, Office of Charities Registration, Albany, New York 12231. A copy of our Annual Report is always available from that agency or from the Foundation. Our research program is supported entirely by voluntary, private contributions that are tax deductible.*



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