CANCER RESEARCH

SIDNEY WEINHOUSE, Editor MARGARET FOTI, Managing Editor Editorial Assistants

TINA ANTONINI

SHARON BROPHY

LILLIAN JARMAN

Creed W. Abell
Joseph C. Arcos
Renato Baserga
Joseph R. Bertino
Phyllis B. Blair
R. K. Boutwell
Harris Busch
Bayard D. Clarkson
Maimon M. Cohen
Eugene D. Day
Vittorio Defendi
Kenneth B. DeOme
Joseph A. DiPaolo
Leon Dmochowski
John L. Fahey

Associate Editors **Emmanuel Farber** Alexander Fefer Gilbert H. Friedell Harry V. Gelboin Phil Gold Abraham Goldin Leonard Hayflick Karl E. Hellström Russell Hilf Erich Hirschberg Robert B. Hurlbert Robert F. Kallman Werner H. Kirsten Saul Kit Marvin Kuschner

Montague Lane Lloyd W. Law Gerald A. LePage Robert Love Enrico Mihich Dan H. Moore Charles A. Nichol Alex B. Novikoff Fred S. Philips G. Barry Pierce Henry C. Pitot David P. Rall Fred Rapp Jay S. Roth R. Wayne Rundles

Marvin A. Schneiderman Albert Segaloff Emma Shelton Michael B. Shimkin Hans O. Sjögren Fred Snyder Sam Sorof Jesse L. Steinfeld Howard M. Temin Arthur C. Upton George Weber John H. Weisburger Charles E. Wenner H. Guy Williams-Ashman

Alan C. Sartorelli

Gerald N. Wogan

Editorial Advisory Board Members

Samuel Abraham
M. Earl Balis
Paul Calabresi
Wallace H. Clark
Roger Daoust
Clyde J. Dawe
Sheldon M. Epstein
Emil Frei, III

Robert C. Gallo Robert A. Good Hidesaburo Hanafusa Charles C. Irving Irving S. Johnson Albert S. Kaplan Elizabeth H. Leduc Nathan Mantel

Joseph L. Melnick Mortimer L. Mendelsohn John B. Moloney Philip O'B. Montgomery, Jr. Donald L. Morton Herbert F. Oettgen Alan S. Rabson Fred Rosen

Katherine K. Sanford Gordon H. Sato Edward A. Smuckler Waclaw Szybalski Benjamin L. Van Duuren Eugene J. Van Scott Ernest Wynder

CANCER RESEARCH is sponsored by the American Association for Cancer Research, Inc.; the American Cancer Society, Inc.; The Jane Coffin Childs Memorial Fund for Medical Research; the National Cancer Institute, United States Public Health Service; the Elsa U. Pardee Foundation; and the Damon Runyon Memorial Fund for Cancer Research, Inc.

NOTICE TO MEMBERS OF THE AMERICAN ASSOCIATION FOR CANCER RESEARCH Officers for 1972-1973

President:

EMMANUEL FARBER, Fels Research Institute, Temple University School of Medicine, Philadelphia,

Pennsylvania 19140

Vice President:

MICHAEL B. SHIMKIN, University of California at San Diego, School of Medicine, 1144 Silverado

Street, La Jolla, California 92037.

HUGH J. CREECH, Institute for Cancer Research, Fox Chase, Philadelphia, Pennsylvania 19111 Secretary-Treasurer: The annual dues of active members of the American Association for Cancer Research include a subscription to the Journal CANCER RESEARCH. The regular annual subscription price to CANCER RESEARCH for members of the Association is \$12.50 per annual volume. Payment of dues and changes of address of members of the Association should be sent promptly to Dr. Creech.

Papers submitted for publication and all other communications for the attention of the editor should be sent to Dr. Sidney Weinhouse, Editor, CANCER RESEARCH, Fels Research Institute, Temple University School of Medicine, Philadelphia, Pennsylvania 19140. Telephone: Area Code 215-221-4720.

NOTICE TO GENERAL SUBSCRIBERS

CANCER RESEARCH is published monthly, one volume per year, for Cancer Research, Inc., by The Williams & Wilkins Company, 428 E. Preston St., Baltimore, Maryland 21202. Subscriptions include the Proceedings of the American Association for Cancer Research issued in March of each year. Except for members of the American Association for Cancer Research, all subscriptions are payable in advance to the publisher of the Journal, The Williams & Wilkins Co., to which all business communications, remittances (in United States currency or its equivalent), and subscription orders should be sent. Non-members of the American Association for Cancer Research, Inc., may subscribe to the Journal CANCER RESEARCH at the rate of \$50.00 per annual volume, including postage, beginning with the 1971 issues. When available, single copies will be sold for \$7.00.

Notify the publisher of changes of address 60 days in advance, giving both the old and new addresses. Copies undeliverable because of address changes will be destroyed.

BACK ISSUES OF THE JOURNAL

Copies of back stock of the Journal CANCER RESEARCH for the two years preceding the current year may be ordered from The Williams & Wilkins Co., address above. All earlier issues may be obtained from Walter J. Johnson, Inc., 111 Fifth Ave., New York, New York 10003. Copies of Part 2 (The Cancer Chemotherapy Screening Data Supplements) may be obtained from the Cancer Chemotherapy National Service Center, Bethesda, Maryland 20014.