

# CANCER RESEARCH

SIDNEY WEINHOUSE, *Editor*

MARGARET FOTI, *Managing Editor*

## *Editorial Assistants*

TINA ANTONINI

BARBARA DZIUBAN

JILL FILLER

## *Associate Editors*

RENATO BASERGA  
NATHANIEL I. BERLIN  
JOHN J. BIESELE  
JOSEPH H. BURCHENAL  
HARRIS BUSCH  
KELLY H. CLIFTON  
ALBERT J. DALTON  
EUGENE D. DAY  
KENNETH B. DEOME  
EMMANUEL FARBER  
GILBERT H. FRIEDEL  
HARRY V. GELBOIN

ABRAHAM GOLDIN  
RUSSELL HILF  
ERICH HIRSCHBERG  
ROBERT B. HURLBERT  
MARVIN KUSCHNER  
GERALD A. LEPAGE  
HERMANN LISCO  
ROBERT LOVE  
NATHAN MANTEL  
JOSEPH L. MELNICK  
DAN H. MOORE  
CHARLES A. NICHOL  
PETER C. NOWELL

FRED S. PHILIPS  
HENRY C. PITOT  
RICHMOND T. PREHN  
DAVID P. RALL  
R. WAYNE RUNDLES  
ALBERT SEGALOFF  
MICHAEL B. SHIMKIN  
JESSE L. STEINFELD  
ARTHUR C. UPTON  
GEORGE WEBER  
JOHN H. WEISBURGER  
CHARLES E. WENNER  
SUMNER WOOD, JR.

## *Editorial Advisory Board*

CREED W. ABELL  
SAMUEL ABRAHAM  
JOSEPH C. ARCOS  
JOHN C. BAILAR, III  
M. EARL BALIS  
W. RAY BRYAN  
WALLACE H. CLARK  
BAYARD D. CLARKSON  
ROGER DAOUST  
CLYDE J. DAWE  
VITTORIO DEFENDI  
SHELDON M. EPSTEIN  
EMIL FREI, III  
ROBERT A. GOOD

THEODORE S. HAUSCHKA  
KARL E. HELLSTRÖM  
CHARLES C. IRVING  
NATHAN KALISS  
WERNER H. KIRSTEN  
MONTAGUE LANE  
ELIZABETH H. LEDUC  
MORTIMER L. MENDELSON  
ENRICO MIHICH  
JOHN B. MOLONEY  
PHILIP O'B. MONTGOMERY, JR.  
HARVEY M. PATT  
G. BARRY PIERCE  
ALAN S. RABSON

HERBERT J. RAPP  
JAY S. ROTH  
KATHERINE K. SANFORD  
ALAN C. SARTORELLI  
EMMA SHELTON  
M. MICHAEL SIGEL  
EDWARD A. SMUCKLER  
SAM SOROF  
HERMAN D. SUIT  
VICTOR A. TRIOLO  
BENJAMIN L. VAN DUUREN  
EUGENE J. VAN SCOTT  
ERNEST WYNDER  
WASLEY D. YUSHOK

---

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

---

## NOTICE TO MEMBERS OF THE AMERICAN ASSOCIATION FOR CANCER RESEARCH

*Officers for 1970-1971*

*President* JAMES F. HOLLAND, Roswell Park Memorial Institute, Buffalo, New York 14203  
*Vice President:* EMIL FREI, III, The University of Texas M. D. Anderson Hospital and Tumor Institute, Houston, Texas 77025

*Secretary-Treasurer:* HUGH J. CREECH, Institute for Cancer Research, Fox Chase, Philadelphia, Pennsylvania 19111

The annual dues of active members of the American Association for Cancer Research include a subscription to the Journal CANCER RESEARCH. 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, Beury Bldg., 3701 N. Broad St., Philadelphia, Pennsylvania 19140. Telephone: Area Code 215-BA 3-2150.

---

## 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. Subscription rates per annual volume in the United States, its possessions, and Canada, \$25.00; in all other countries, \$27.00. Single copies when available, \$5.00.

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.

---

Second-class postage paid at Baltimore, Maryland.  
Copyright 1970 by Cancer Research, Inc.