

CANCER RESEARCH

This journal is sponsored by The American Association for Cancer Research, Inc.; The Anna Fuller Fund; Cancer Research Division, Donner Foundation, Inc.; The Jane Coffin Childs Memorial Fund for Medical Research; and The Elsa U. Pardee Foundation.

Editors

PAUL E. STEINER, *Editor-in-Chief*

W. U. GARDNER

BALDUIN LUCKÉ

HAROLD RUSCH

Advisory Editors

JOHN J. BITTNER, *University of Minnesota*
AUSTIN M. BRUES, *Argonne National Laboratory*
ALEXANDER BRUNSCHWIG, *Memorial Hospital*
E. V. COWDRY, *Washington University*
ALVIN J. COX, *Stanford University*
LOUIS I. DUBLIN, *Metropolitan Life Insurance Company*
CHARLES E. DUNLAP, *Tulane University*
F. DURAN-REYNALS, *Yale University*
G. FAILLA, *College of Physicians and Surgeons, Columbia University*
LOUIS F. FIESER, *Harvard University*
JACOB FURTH, *Oak Ridge, Tennessee*
HARRY S. N. GREENE, *Yale University*
JESSE P. GREENSTEIN, *National Cancer Institute*

CHARLES HUGGINS, *University of Chicago*
JOHN G. KIDD, *Cornell University*
ARTHUR KIRSCHBAUM, *University of Minnesota*
ALBERT L. LEHNINGER, *University of Chicago*
C. C. LITTLE, *Roscoe B. Jackson Memorial Laboratory*
MORTON McCUTCHEON, *University of Pennsylvania*
G. BURROUGHS MIDER, *University of Rochester*
EDITH H. QUIMBY, *College of Physicians and Surgeons, Columbia University*
C. P. RHOADS, *Memorial Hospital*
E. W. SHRIGLEY, *Indiana University*
HAROLD L. STEWART, *National Cancer Institute*
ALBERT TANNENBAUM, *Michael Reese Hospital*
SHIELDS WARREN, *Harvard University*

CANCER RESEARCH is published monthly for Cancer Research, Inc., by the University of Chicago Press, 5750 Ellis Avenue, Chicago 37, Illinois. The subscription price is \$7.00 per year; the price of single copies is \$1.00. Orders for less than a full year will be charged at the single copy rate. Postage is prepaid by the publishers on all orders from the United States and its possessions, Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, Guatemala, Haiti, Republic of Honduras, Mexico, Morocco (Spanish Zone), Nicaragua, Panama, Paraguay, Peru, Rio de Oro, El Salvador, Spain (including Balearic Islands, Canary Islands, and the Spanish Offices in Northern Africa; Andorra), Spanish Guinea, Uruguay, and Venezuela. Postage is charged extra as follows: For Canada and Newfoundland, 48 cents on annual subscriptions (total \$7.48), on single copies 4 cents (total \$1.04); for all other countries in the Postal Union, \$1.20 on annual subscriptions (total \$8.20), on single copies 10 cents (total \$1.10).

The following is an authorized agent:

For the British Empire, except North America and Australasia:

Cambridge University Press, Bentley House, 200 Euston Road, London, N.W. 1, England. Prices of yearly subscriptions and of single copies may be had on application.

Business communications, remittances (in United States currency or its equivalent), and subscriptions should be addressed to THE UNIVERSITY OF CHICAGO PRESS, 5750 Ellis Avenue, Chicago 37, Illinois. All other communications should be addressed to Paul E. Steiner, M.D., University of Chicago, Chicago 37, Illinois.

Claims for missing numbers should be made within the month following the regular month of publication. The publishers expect to supply missing numbers free only when losses have been sustained in transit and when the reserve stock will permit.

No responsibility is accepted by the Editors, by Cancer Research, Inc., or by the publishers of *CANCER RESEARCH* for opinions expressed by contributors.

Entered as second-class matter, February 15, 1949, at the post office at Chicago, Ill., under the Act of March 3, 1879.

Copyright 1949 by Cancer Research, Inc.