

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, <i>University of Minnesota</i> | CHARLES HUGGINS, <i>University of Chicago</i> |
| AUSTIN M. BRUES, <i>Argonne National Laboratory</i> | JOHN G. KIDD, <i>Cornell University</i> |
| ALEXANDER BRUNSCHWIG, <i>Memorial Hospital</i> | ARTHUR KIRSCHBAUM, <i>University of Minnesota</i> |
| E. V. COWDRY, <i>Washington University</i> | ALBERT L. LEHNINGER, <i>University of Chicago</i> |
| ALVIN J. COX, <i>Stanford University</i> | C. C. LITTLE, <i>Roscoe B. Jackson Memorial Laboratory</i> |
| LOUIS I. DUBLIN, <i>Metropolitan Life Insurance Company</i> | MORTON McCUTCHEON, <i>University of Pennsylvania</i> |
| CHARLES E. DUNLAP, <i>Tulane University</i> | G. BURROUGHS MIDER, <i>University of Rochester</i> |
| F. DURAN-REYNALS, <i>Yale University</i> | EDITH H. QUIMBY, <i>College of Physicians and Surgeons, Columbia University</i> |
| G. FAILLA, <i>College of Physicians and Surgeons, Columbia University</i> | C. P. RHOADS, <i>Memorial Hospital</i> |
| LOUIS F. FIESER, <i>Harvard University</i> | E. W. SHRIGLEY, <i>Yale University</i> |
| JACOB FURTH, <i>Veterans Administration Hospital, Dallas</i> | HAROLD L. STEWART, <i>National Cancer Institute</i> |
| HARRY S. N. GREENE, <i>Yale University</i> | ALBERT TANNENBAUM, <i>Michael Reese Hospital</i> |
| JESSE P. GREENSTEIN, <i>National Cancer Institute</i> | SHIELDS WARREN, <i>Harvard University</i> |

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, December 16, 1946, at the post office at New Haven, Conn., under the Act of March 3, 1879. Application pending transfer to Chicago, Ill.

Copyright 1949 by Cancer Research, Inc.