



# Cancer Research

The Official Organ of the American Association for Cancer Research, Inc.

Volume 36 / Number 10 / October 1976

## Contents

*Asterisks preceding page numbers refer to human studies.*

- 3545** A Baconian in Cancer Research: Autobiographical Essay. **Leonell C. Strong.**
- 3554** Chromosomal Characteristics of Malignant Lymphoma in Northern Pike (*Esox lucius*) from the United States. **Jacqueline Whang-Peng, Ron A. Sonstegard, and Clyde Dawe.**
- 3561** Bacterial Proteinaceous Products (Bacteriocins) as Cytotoxic Agents of Neoplasia. **Hannah Farkas-Himsley and Rose Cheung.**
- 3568** Transformation-dependent Modifications in Released and Cell-bound Surface Proteins Detected by Antisera to Shed Antigens. **Manuel Rieber and Egidio Romano.**
- \*3574** Effects of Bleomycin on Human Tongue Carcinoma Cells as Revealed by Electron Microscopy. **Gonpachiro Yasuzumi, Yukikazu Hyo, Tsutomu Hoshiya, and Fumioki Yasuzumi.**
- 3584** Effect of Defibrination on Tumor Growth and Response to Chemotherapy. **William D. DeWys, Hau C. Kwaan, and Sudha Bathina.**
- 3588** Comparison of *in Vivo* Translation Rates and Messenger RNA Levels of  $\alpha_2\text{U}$ -Globulin in Rat Liver and Morris Hepatoma 5123D. **Albrecht E. Sippel, David T. Kurtz, Harold P. Morris, and Philip Feigelson.**
- 3594** Pretranslational Control of Tryptophan Oxygenase Levels in Morris Hepatoma and Host Liver. **Lee-lavati Ramanarayanan-Murthy, Paul D. Colman, Harold P. Morris, and Philip Feigelson.**
- \*3600** Enhancement of Drug Cytotoxicity by Recruitment of Leukemic Myeloblasts with Humoral Stimulation. **Judith E. Karp and Philip J. Burke.**
- 3604** Conversion of the Oncogenic 1-Methylguanine 3-Oxide to 3-Hydroxy-1-methylxanthine. **Jerome J. McDonald, Gerhard Stöhrer, and George Bosworth Brown.**
- 3608** Tumoricidal Properties of Mouse Macrophages Activated with Mediators from Rat Lymphocytes Stimulated with Concanavalin A. **I. J. Fidler, J. H. Darnell, and M. B. Budmen.**
- 3616** Effect of L-Asparaginase and Asparagine Deprivation on RNA Metabolism in Mouse Leukemia L5178Y Cells in Suspension Culture. **Tadashi Nakashima, Michihiko Kuwano, Shin-ichi Akiyama, and Hideya Endo.**
- 3622** Levels of C-type Viral p30 Antigens in Lymphoma-resistant Mice. **Ronald D. Barnes, Maureen A. Tuffrey, Pamela Crewe, Linda Dawson, Kathy Brown, and Judy Joyner.**
- 3625** Lack of Carcinogenicity of 4-, 5-, 6-, 7-, 8-, 9-, and 10-Hydroxybenzo(a)pyrene on Mouse Skin. **Jaime Kapitulnik, Wayne Levin, Haruhiko Yagi, Donald M. Jerina, and Allan H. Conney.**
- 3629** Multiple Sites of Action of N-Hydroxy-2-acetylaminofluorene in Rat Hepatic Nuclear Transcription. **Fu-Li Yu and Dezider Grunberger.**
- 3634** Major Proteins and Secretory Character of the Rough Endoplasmic Reticulum of a Mouse Mammary Adenocarcinoma. **Frank Slaby and Mary Slaby.**
- 3639** Differences in Transcription between Transformed Mouse Cells in Culture and the Tumors that They Produce in Syngeneic Mice. **Léo J. Grady.**
- 3642** Immunization against Feline Oncornavirus Disease Using a Killed Tumor Cell Vaccine. **Richard G. Olsen, Edward A. Hoover, Larry E. Mathes, Linda Heding, and Joseph P. Schaller.**
- 3647** Binding of Metabolically Activated Benzo(a)pyrene to Nuclear Macromolecules. **John M. Pezzuto, Michael A. Lea, and Chung S. Yang.**
- 3654** Effects of Actinomycin D on Cell Cycle Kinetics and the DNA of Chinese Hamster and Mouse Mammary

Tumor Cells Cultivated *in Vitro*. **Ruth Roots and Kendric C. Smith.**

- \*3659** Inhibition of DNA Synthesis in Normal and Malignant Human Cells by Triazinate (Baker's Antifol) and Methotrexate. **Roland T. Skeel, Wendy L. Sawicki, Arlene R. Cashmore, and Joseph R. Bertino.**
- \*3665** Correlation of Regional Lymph Node *in Vitro* Antitumor Immunoreactivity Histology with Colorectal Carcinoma. **Eric Pihl, Richard C. Nairn, Antony P. Nind, H. Konrad Muller, E. S. R. Hughes, Alan M. Cuthbertson, and Alex J. Rollo.**
- 3672** Inhibition of Antibody-Complement-mediated Killing of Tumor Cells by Hormones. **Seymour I. Schlager, Sarkis H. Ohanian, and Tibor Borsos.**
- \*3678** Abnormalities of Complement and Its Components in Patients with Acute Leukemia, Hodgkin's Disease, and Sarcoma. **J. Leonard Lichtenfeld, Peter H. Wiernik, Michael R. Mardiney, Jr., and Romeo M. Zarco.**
- 3681** Multiphasic Incidence of Foreign Body-induced Sarcomas. **K. Gerhard Brand, Lance C. Buoen, and Inge Brand.**
- 3684** Distribution and Excretion of [<sup>3</sup>H]Vincristine in the Rat and the Dog. **Manford C. Castle, David A. Margileth, and Vincent T. Oliverio.**
- 3690** The Specificity of Concomitant Tumor Immunity at Large Tumor Volumes. **Peter J. Deckers, Daria H. Pardridge, Bosco S. Wang, and John A. Mannick.**
- 3695** Humoral Regulation of Cell-mediated Immunity to Syngeneic Tumor. **Chou-Chik Ting.**
- 3702** Effect of Aromatic Retinoids on Rat Chondrosarcoma Glycosaminoglycan Biosynthesis. **Stanley S. Shapiro, Melanie Bishop, James P. Poon, and Patrick W. Trown.**
- \*3707** Peripheral Leukocyte Migration Inhibition Reactivity to Breast Cancer Antigens in Patients with Breast Cancer and in Normal Controls. **Lorne J. Brandes and Gerald J. Goldenberg.**
- 3711** The Reversible Expression of an Adult Isozyme Locus, *Gdc-1*, in Tumors of the Mouse. **Leslie P. Kozak and Edwin D. Murphy.**
- 3718** *In Vivo* Clonogenic Tumor Cell Kinetics following 1,3-Bis(2-chloroethyl)-1-Nitrosourea Brain Tumor Therapy. **Mark L. Rosenblum, Kathy D. Knebel, Dolores A. Vasquez, and Charles B. Wilson.**
- 3726** Prolactin Binding to Mammary Gland, 7,12-Dimethylbenz(a)anthracene-induced Mammary Tumors, and Liver in Rats. **R. D. Smith, Russell Hliff, and A. E. Senior.**
- 3732** Effects of Grafts of Single Anterior Pituitary Glands on the Incidence and Type of Mammary Neoplasm in Neutron- or  $\gamma$ -irradiated Fischer Female Rats. **Kelly H. Clifton, Evan B. Double, and Bhavani N. Sridharan.**
- 3736** Influence of Hormonal Alteration of Host on Estrogen-binding Capacity in 7,12-Dimethylbenz(a)anthracene-induced Mammary Tumors. **Scott L. Gibson and Russell Hliff.**
- \*3742** Growth Rates of Normal and Abnormal Human Mammary Epithelia in Cell Culture. **Gertrude Case Buehring and Robert R. Williams.**
- 3748** Hyperplasia of the Parathyroids and the Pituitary in Rats with Experimental Leydigomas and Inhibitory Effect of Several Steroids. **I. Petrea and N. Guérinée.**
- 3761** Hypoxia-dependent Reduction of 1-(2-Nitro-1-imidazolyl)-3-methoxy-2-propanol by Chinese Hamster Ovary Cells and KHT Tumor Cells *in Vitro* and *in Vivo*. **Alummootil J. Varghese, Sandor Gulyas, and Jagit K. Mohindra.**
- 3766** The Effect of Colchicine on the Induction of Ornithine Decarboxylase by 12-O-Tetradecanoyl-phorbol-13-acetate. **T. G. O'Brien, R. C. Simsiman, and R. K. Boutwell.**
- 3771** Neuropharmacological Effects of Methotrexate Perfused through the Cerebrospinal Fluid System of the Rhesus Monkey. **Robert F. Shepard, Phillip C. Merker, Michael D. Walker, and Floyd H. Gilles.**
- \*3779** Metabolism of 6-Mercaptopurine in Human Leukemic Cells. **Tomihiko Higuchi, Toru Nakamura, and Gyoichi Wakisaka.**
- 3784** Radiation-induced Murine Leukemia ERLD in Cell Culture. **Alberta M. Albrecht, June L. Biedler, Dorris J. Hutchison, Barbara A. Spengler, and Elisabeth Stockert.**
- 3789** The Effect of 1- $\beta$ -D-Arabinofuranosylcytosine on Cell Viability, DNA Synthesis, and Chromatid Breakage in Synchronized Hamster Fibrosarcoma Cells. **Peter A. Jones, Mary S. Baker, and William F. Benedict.**
- 3798** Action of the *Vinca* Alkaloids Vincristine, Vinblastine, and Desacetyl Vinblastine Amide on Microtubules *in Vitro*. **Richard H. Himes, Roderick N. Kersey, Irene Heller-Bettinger, and Fred E. Samson.**

- 3803** Alterations in Adriamycin Efficacy by Phenobarbital. **Steven D. Reich and Nicholas R. Bachur.**
- 3807** Inhibition of *de Novo* Pyrimidine Nucleotide and DNA Synthesis and Growth of Cultured Novikoff Rat Hepatoma Cells and Other Cell Lines by Pyrazofurin (NSC 143095). **Peter G. W. Plagemann and Marsha Behrens.**
- \*3813** Flow Microfluorometric Patterns of Human Bone Marrow and Tumor Cells in Response to Cancer Chemotherapy. **Awtar Krishan, Susan W. Pitman, Martin H. N. Tattersall, Kamla D. Paika, Daniel C. Smith, and Emil Frei, III.**
- \*3821** Template Primer Inactivation by *cis*- and *trans*-Dichlorodiammine Platinum for Human DNA Polymerase  $\alpha$ ,  $\beta$ , and Rauscher Murine Leukemia Virus Reverse Transcriptase, as a Mechanism of Cytotoxicity. **Harold C. Harder, R. Graham Smith, and Andre F. Leroy.**
- 3830** Regression of Rat Mammary Tumors Effected by a Gonadoliberin Analog. **Eugene R. DeSombre, Edwin S. Johnson, and Wilfrid F. White.**
- 3834** Single-Strand Scission and Repair of DNA in Mammalian Cells by Bleomycin. **Zafar M. Iqbal, Kurt W. Kohn, Regina A. G. Ewig, and Albert J. Fornace, Jr.**
- 3839** Effect of pH on the Bleomycin-induced DNA Single-Strand Scission in L1210 Cells and the Relation to Cell Survival. **Kurt W. Kohn and Regina A. G. Ewig.**
- \*3842** Fetal Calf Serum-induced Blastogenic and Cytotoxic Responses of Human Lymphocytes. **John V. Zielske and Sidney H. Golub.**
- 3847** Brief Communications:
- \*3847** High Terminal Deoxynucleotidyl Transferase Activity in Acute Myelogenous Leukemia. **B. I. Sahai Srivastava, Sohaib A. Khan, and Edward S. Henderson.**
- 3851** A Viral Immunodepressive Factor Associated with Experimental Mouse Tumors. **Anna M. Iorio, Anna Barzi, Paola Rivosecchi Merletti, Abraham Goldin, and Enzo Bonmassar.**
- 3854** Meeting Reports:
- 3854** Conference on Extrapolation of Data from Animals to Man. **Sidney Weinhouse.**
- 3856** San Diego Conference on Oncodevelopmental Gene Expression: May 29 to June 1, 1976. **William H. Fishman and Stewart Sell.**
- 3859** Special Announcement: Annual Meeting of the American Association for Cancer Research, Inc.
- 3860** Announcements.