



CONTENTS

Asterisks preceding page numbers refer to human studies.

- 485** **Viral Etiology of Cancer and Leukemia: A Look into the Past, Present, and Future—G.H.A. Clowes Memorial Lecture.** Ludwik Gross.
- 494** **Tumor Promotion and the Induction of Epidermal Ornithine Decarboxylase Activity in Mechanically Stimulated Mouse Skin.** Ian Clark-Lewis and Andrew W. Murray.
- 498** **Effects of Hyperthermia on Primary and Metastatic Tumor Growth and Host Immune Response in Rats.** Melvin Schechter, Stephen M. Stowe, and Harold Moroson.
- *503** **Amino-terminal Sequence of a Carcinoembryonic Antigen-like Glycoprotein Isolated from the Colonic Lavages of Healthy Individuals.** John E. Shively, Charles W. Todd, Vay Liang W. Go, and Marianne L. Egan.
- 506** **Mutagenicity of Heterocyclic Nitrogen Mustards (ICR Compounds) in Cultured Mammalian Cells.** J. Patrick O'Neill, James C. Fuscoe, and Abraham W. Hsie.
- 510** **Alterations in Thermal Stability of Rat Liver Chromatin and DNA Induced *in Vivo* by Dimethylnitrosamine and Diethylnitrosamine.** Bernard W. Stewart and Emmanuel Farber.
- *516** **Glucocorticoid-binding Components in Human Thymus Hyperplasia.** Franco O. Ranelletti, Marco Carmignani, Stefano Iacobelli, and Pietro Tonali.
- 521** **Selectivity of Inhibition by Anticancer Agents of Mouse Spleen Immune Effector Functions Involved in Responses to Sheep Erythrocytes.** M. J. Ehrke, S. A. Cohen, and E. Mihich.
- 531** ***In Vitro* Interaction of L1210 Cells with Phospholipid Vesicles.** Vilma K. Jansons, Peddrick Weis, Tsui-hua Chen, and William R. Redwood.
- 536** **Mutagenicity of Carcinogenic Mycotoxins in *Salmonella typhimurium*.** Yoshio Ueno, Kiyoshi Kubota, Teruo Ito, and Yasuko Nakamura.
- 543** **Metabolism and Intracellular Retention of 1- β -D-Arabinofuranosylcytosine as Predictors of Response of Animal Tumors.** Youcef M. Rustum.
- *550** **Effect of Hypothermia and Hyperthermia on the Induction of Chromosome Aberrations by Adriamycin in Human Leukocytes.** B. K. Vig.
- 556** **Blood Flow-interrupting Hyperthermic Chemotherapy on Established Autochthonous Mouse Sarcoma Induced by 3-Methylcholanthrene.** Yoshira Kidera and Tsuneo Baba.
- *560** **Inhibitory Effects of the New Mitotic Inhibitor 5-Chloropyrimidin-2-one and of Vincristine on Human Cells *in Vitro*.** Einar Wibe, Reidar Oftebro, Terje Christensen, Søren G. Laland, Erik O. Pettersen, and Tore Lindmo.
- 566** **Equivalent Expression of Endogenous Murine Leukemia Virus-Related Genes in C3H/10T^{1/2} Cells and Chemically Transformed Derivative Cells.** Michael J. Getz, Paula K. Elder, and Harold L. Moses.
- 570** **Induction of Thermotolerance in Chinese Hamster Ovary Cells by High (45°) or Low (40°) Hyperthermia.** Kurt J. Henle, Joseph E. Karamuz, and Dennis B. Leeper.
- 575** **Nonlinear Dose-Response Relationship for the Binding of the Carcinogen Benzo(a)pyrene to Rat Liver DNA *in Vivo*.** Werner K. Lutz, Andreas Viviani, and Christian Schlatter.
- *579** **Pyrimidine Nucleoside Monophosphate Kinase from Human Leukemic Blast Cells.** Kenneth R. Hande and Bruce A. Chabner.
- 586** **Suppression of Dysplasia and Hyperplasia by Calcium in Organ-cultured Urinary Bladder Epithelium.** David H. Reese and Rosalind D. Friedman.
- *593** **Comparative Mammalian Metabolism of Adriamycin and Daunorubicin.** Herbert Loveless, Emanuela Arena, Ronald L. Felsted, Nicholas R. Bachur.
- *599** **A Cancer-associated, Fast, Homoarginine-sensitive, Electrophoretic Form of Serum Alkaline Phosphatase.** Sharon L. Ehrmeyer, Brian L. Joiner, Lawrence Kahan, Frank C. Larson, and Robert L. Metzberg.
- *602** **Isolation of Novel Glycoprotein HNCI β from the**

- Urine of a Patient with Acute Monocytic Leukemia.** Daniel Rudman, Rajender K. Chawla, Daniel W. Nixon, John H. Roler, and Vinod R. Shah.
- 608 Formation of a Mutagenic Drug Metabolite by Intestinal Microorganisms.** Robert P. Batzinger, Ernest Bueding, Bandaru S. Reddy, and John H. Weisburger.
- 613 Role of Arylhydroxamic Acid Acyltransferase in the Mutagenicity of *N*-Hydroxy-*N*-2-fluorenylacetamide in *Salmonella typhimurium*.** Charles E. Weeks, William T. Allaben, Shirley C. Louie, Edward J. Lazear, and Charles M. King.
- *619 A Comparison of Methods for the Isolation of Carcinoembryonic Antigen.** Pamela M. Kimball and Michael G. Brattain.
- 624 Correlation of Anchorage-independent Growth with Tumorigenicity of Chemically Transformed Mouse Epidermal Cells.** Nancy H. Colburn, W. F. Vorder Bruegge, J. R. Bates, R. H. Gray, J. D. Rossen, W. H. Kelsey, and T. Shimada.
- *635 A Potent Inhibitor of Normal and Transformed Cell Growth Derived from Contact-inhibited Cells.** George Lipkin, Margarete E. Knecht, and Martin Rosenberg.
- 644 Cytological Effects of 1-(2-Nitro-1-imidazolyl)-3-methoxy-2-propanol, (Misonidazole) on Hypoxic Mammalian Cells *in Vitro*.** Charles R. Geard, Stephanie F. Povlas, Myles B. Astor, and Eric J. Hall.
- *650 Inhibition of Human Granulocyte Function by Methotrexate.** Jeffrey S. Hyams, Milton H. Donaldson, Julia A. Metcalf, and Richard K. Root.
- 656 Differential Sensitivities of Five Rat Hepatoma Cell Lines to Anticancer Drugs.** S. C. Barranco, B. R. Haenelt, and E. L. Gee.
- 661 A Morphometrical Analysis of Lymph Node Responses to Tumors of Different Immunogenicity.** Cornelis J. H. van de Velde, Chris J. L. M. Meyer, Cees J. Cornelisse, Edo A. van der Velde, Luke M. van Putten, and Albert Zwaveling.
- *668 Membrane Transport of Methotrexate in Human Lymphoblastoid Cells.** Robert D. Warren, Arlene P. Nichols, and Richard A. Bender.
- *672 Differential Inhibition of the Rejoining of X-ray-induced DNA Strand Breaks in Normal and Transformed Human Fibroblasts Treated with 1,3-Bis(2-chloroethyl)-1-nitrosourea *in Vitro*.** Leonard C. Erickson, Matthews O. Bradley, and Kurt W. Kohn.
- 678 Skin Tumor-initiating Activities of the Twelve Isomeric Phenols of Benzo(a)pyrene.** T. J. Slaga, W. M. Bracken, S. Dresner, W. Levin, H. Yagi, D. M. Jerina, and A. H. Conney.
- *682 Clinical, Biological, and Biochemical Effects of Pyrazofurin.** Edwin C. Cadman, Douglas E. Dix, and Robert E. Handschumacher.
- 689 Immunotherapy of an Established Rat Mammary Adenocarcinoma (137 62A) with Intratumor Injection of *Corynebacterium parvum*.** John W. Kreider, Gerald L. Bartlett, Dallas M. Purnell, and Susan Webb.
- 693 Exceptional Carcinogenic Activity of Benzo[a]anthracene 3,4-Dihydrodiol in the Newborn Mouse and the Bay Region Theory.** Peter G. Wislocki, Jaime Kapitulnik, Wayne Levin, Roland Lehr, Maria Schaefer-Ridder, Jean M. Karle, Donald M. Jerina, and Allan H. Conney.
- 697 Loss of Activity of an *N*'-Methyl-4-pyridone-5-carboxamide-forming *N*'-Methylnicotinamide Oxidase in Livers of Rats Fed 2-Acetylaminofluorene.** Michiko Ohkubo and Shinji Fujimura.
- 703 Role of Lipopolysaccharide in the Production of Plasma Cell Tumors in Mice Given Mineral Oil Injections.** Micsunica Platica and Vincent P. Hollander.
- 706 Distribution of Free and Liposome-entrapped [³H]-Methotrexate in the Central Nervous System after Intracerebroventricular Injection in a Primate.** H. K. Kimelberg, T. F. Tracy, R. E. Watson, D. Kung, F. L. Reiss, and R. S. Bourke.
- 713 Leukemoid Reaction in BALB/c Mice Bearing Primary Tumors Induced by 3-Methylcholanthrene.** Takao Kodama, Tsugumichi Kawamura, and Hiroshi Kobayashi.
- *716 Immunological Characterization of Normal and Leukemia-associated Antigens of Acute Myelomonocytic Leukemia and Chronic Myelogenous Leukemia in Blast Crisis.** T. Mohanakumar, D. S. Miller, J. Anderson, and R. S. Metzgar.
- *723 Alterations in Serum Glycosyltransferases and 5'-Nucleotidase in Breast Cancer Patients.** Clement Ip and Thomas Dao.
- 729 Activation of C-type Virus during Chemically Induced Leukemogenesis in Mice.** Bjørn Andersen Nexø and Kay Ulrich.
- 736 DNA Repair in Normal and Preneoplastic Mammary Tissues.** William J. Bodell and Mihir R. Banerjee.
- 741 Cyclic Nucleotides and Their Associated Enzymes in 9,10-Dimethyl-1,2-benzanthracene-induced Mam-**

- mary Tumors of Rats.** James A. Rillema, John A. Mulder, and Larry D. Anderson.
- *745 Estrogen Profiles of Premenopausal Women with Breast Cancer.** Philip Cole, Daniel Cramer, Stella Yen, Ralph Paffenbarger, Brian MacMahon, and James Brown.
- 749 Determinants of Glycolytic Rate in Normal and Transformed Chick Embryo Fibroblasts.** John B. Fagan and Efraim Racker.
- 759 Relationship between Insulin and Estrogen Binding to Growth Response in 7,12-Dimethylbenz(a)anthracene-Induced Rat Mammary Tumors.** Samir M. Shafie and Russell Hilf.
- *765 Kinetics of Growth and Ectopic Production of Human Chorionic Gonadotropin by an Ovarian Cystadenocarcinoma Cell Line Maintained *In Vitro*.** Jan Kanabus, Glenn D. Braunstein, Patricia K. Emry, Philip J. DiSaia, and Maclyn E. Wade.
- 771 Retinoic Acid Inhibition of the Comitogenic Action of Mezerein and Phorbol Esters in Bovine Lymphocytes.** Thomas W. Kensler and Gerald C. Mueller.
- 776 Covalent Binding of the Carcinogen Trichloroethylene to Hepatic Microsomal Proteins and to Exogenous DNA *In Vitro*.** Sipra Banerjee and Benjamin L. Van Duuren.
- *781 Early Steps in Mutagenesis by Hycanthone.** Robert Bases, Frances Mendez, Flora Elequin, Doreen Liebeskind, Arthur Kozin, and Simon Neubort.
- 787 Quantification of Bleomycin Pulmonary Toxicity in Mice by Changes in Lung Hydroxyproline Content and Morphometric Histopathology.** Branimir Ivan Sikic, David M. Young, Edward G. Mimnaugh, and Theodore E. Gram.
- 793 Inhibition of 12-O-Tetradecanoylphorbol-13-acetate-induced Ornithine Decarboxylase Activity in Mouse Epidermis by Vitamin A Analogs (Retinoids).** A. K. Verma, H. M. Rice, B. G. Shapas, and R. K. Boutwell.
- *802 Differential Repair of 1-(2-Chloroethyl)-3-(4-methylcyclohexyl)-1-nitrosourea-induced DNA Damage in Two Human Colon Tumor Cell Lines.** Leonard C. Erickson, Rainhardt Osieka, Kurt W. Kohn.
- 809 Induction of Concentration-dependent Blockade in the G₂ Phase of the Cell Cycle by Cancer Chemotherapeutic Agents.** Bruce F. Kimler, Martin H. Schneiderman, and Dennis B. Leeper.
- 815 Inhibition of RNA Synthesis in Ehrlich Tumor Cells by the Dialdehyde Derivative of Inosine (NSC-118994).** Joseph G. Cory, Sandra H. Parker, and Cynthia S. Fox.
- 823 γ -Glutamyltransferase in Putative Premalignant Liver Cell Populations during Hepatocarcinogenesis.** Ross Cameron, John Kellen, Arnost Kolin, Aaron Malkin, and Emmanuel Farber.
- 830 *In Vitro* Lymphocyte Stimulation and the Generation of Cytotoxic Lymphocytes with Drug-Induced Antigenic Lymphomas.** Carla Testorelli, Paola Franco, Abraham Goldin, and Angelo Nicolin.
- 835 Changes in DNA Associated with Induction of Erythroid Differentiation by Dimethyl Sulfoxide in Murine Erythroleukemia Cells.** Masaaki Terada, Uri Nudel, Eitan Fibach, Richard A. Rifkind, and Paul A. Marks.
- 841 Breakage of DNA and Alterations in Folded Genomes by Inducers of Differentiation in Friend Erythroleukemic Cells.** W. Scher and C. Friend.
- 850 Altered Toxicity of 5-Fluorouracil following Treatment with *Corynebacterium parvum*.** Roger S. Foster, Jr.
- Communications:**
- 859 Cyclic Adenosine 3':5'-Monophosphate and Methotrexate Transport in L1210 Cells.** Gary B. Henderson, Edward M. Zevely, and F. M. Huennekens.
- 862 Enhancement by *Corynebacterium parvum* of the Normal and Tumor Tissue Response to Hyperthermia.** Muneyasu Urano, Marie Overgaard, Herman Suit, Paul Dunn, and Robert Sedlacek.
- 865 Letter to the Editor: Effect of Aging in Two-Stage Carcinogenesis on Mouse Skin with Phorbol Myristate Acetate as Promoting Agent.** Benjamin L. Van Duuren, Ann C. Smith, and Susan M. Melchionne.
- *867 Meeting Report: First International Workshop on Chromosomes in Leukemia.** H. van den Berghe, L. Brandt, G. H. Borgström, D. Catovsky, A. de la Chapelle, H. M. Golomb, D. K. Hossfeld, S. Lawler, J. Lindsten, A. Louwagie, F. Mitelman, B. R. Reeves, J. D. Rowley, A. A. Sandberg, L. Teerenhovi, and P. Vuopio.
- 870 Obituary: Riojun Kinoshita.** Susumu Ohno.
- 872 Special Announcement**
- 873 Announcements**
- 874 Errata**
- 875 Author Index**

Cancer Research

The Journal of Cancer Research (1916–1930) | The American Journal of Cancer (1931–1940)

38 (3)

Cancer Res 1978;38:485-874.

Updated version Access the most recent version of this article at:
<http://cancerres.aacrjournals.org/content/38/3.citation>

E-mail alerts [Sign up to receive free email-alerts](#) related to this article or journal.

Reprints and Subscriptions To order reprints of this article or to subscribe to the journal, contact the AACR Publications Department at pubs@aacr.org.

Permissions To request permission to re-use all or part of this article, use this link <http://cancerres.aacrjournals.org/content/38/3.citation>. Click on "Request Permissions" which will take you to the Copyright Clearance Center's (CCC) Rightslink site.