



CONTENTS

Asterisks * preceding page numbers refer to studies using human-derived material.

Perspectives in Cancer Research

- 1917 **Challenging Problems in Cocarcinogenesis.** Isaac Berenblum.

BASIC SCIENCES

- 1922 **Effect of Retinoic Acid on the Late-Stage Promotion of Transformation in JB6 Mouse Epidermal Cells in Culture.** Helen L. Gensler, Lynn M. Matrisian and George T. Bowden.
- 1926 **Extraction of a Murine Tumor-specific Antigen from Cells and Plasma Membranes Using 1-Butanol: Augmentation of Antigen Yield by Colchicine.** Stephen J. LeGrue and Barry D. Kahan.
- * 1930 **Elimination of Small Cell Lung Cancer Cells *in Vitro* from Human Bone Marrow by a Monoclonal Antibody.** Tetsuro Okabe, Tsutomu Kaizu, Keiya Ozawa, Akio Urabe and Fummaro Takaku.
- * 1934 **Comparison of Growth Factors Functionally Related to Epidermal Growth Factor in the Urine of Normal and Human Tumor-bearing Athymic Mice.** Daniel R. Twardzik, Edward S. Kimball, Stephen A. Sherwin, Jane E. Ranchalis and George J. Todaro.
- * 1940 **Lymphocyte Supernatant-induced Human Monocyte Tumoricidal Activity: Dependence on the Presence of γ -Interferon.** John R. Sadlik, Maureen Hoyer, Marie Ann Leyko, Rebecca Horvat, Michael Parmely, Caroline Whitacre, Bruce Zwilling and John J. Rinehart.
- 1946 **Requirements for and Kinetics of Growth Arrest of Neoplastic Cells by Confluent 10T1/2 Fibroblasts Induced by a Specific Inhibitor of Cyclic Adenosine 3':5'-Phosphodiesterase.** John S. Bertram and Michael B. Faletto.
- * 1953 **Antagonistic Effect of Polyinosinic-Polycytidylic Acid on the Cell Lethality Produced by 5-Fluorouracil in Human Colon Carcinoma Cells *in Vitro*.** Masaaki Iigo and Robert I. Glazer.
- 1958 **Modulation of Protein Kinase C Activity and [3 H]Phorbol 12,13-Dibutyrate Binding by Various Tumor Promoters in Murine Brain Cells.** Karen L. Leach and Peter M. Blumberg.
- 1964 **A Role of Estrogens and Insulin Binding in the Dietary Lipid Alteration of R3230AC Mammary Carcinoma Growth in Rats.** Jeffrey M. Feldman and Russell Hiif.
- 1973 ***In Vitro* and *In Vivo* Light Dose Rate Effects Related to Hematoporphyrin Derivative Photodynamic Therapy.** Charles J. Gomer, Natalie Rucker, Nicholas J. Razum and A. Linn Murphree.
- * 1978 **Ultrarapid Recovery from Lethal Effects of Bleomycin and γ -Radiation in Stationary-Phase Human Diploid Fibroblasts.** Carol W. Moore, Arnold W. Malcolm, Kathleen N. Tomkinson and John B. Little.
- * 1982 **Rapid and Slow DNA Rejoining in Nondividing Human Diploid Fibroblasts Treated with Bleomycin and Ionizing Radiation.** Carol W. Moore and John B. Little.
- 1987 **Cull Rates of Dairy Cattle with Antibodies to Bovine Leukemia Virus.** Mark C. Thurmond, Chris B. Maden and Randy L. Carter.
- 1990 **Rates of Hydrolysis and Extents of DNA Binding of 5-Methylchrysene Dihydrodiol Epoxides.** Assieh A. Melikian, Joanna M. Leszczynska, Shantu Amin, Stephen S. Hecht, Dietrich Hoffmann, John Pataki and Ronald G. Harvey.
- 1997 **Requirement of Essential Fatty Acid for Mammary Tumorigenesis in the Rat.** Clement Ip, Christopher A. Carter and Margot M. Ip.
- 2002 **Potential for Selective Enhancement of the *In Vivo* Metabolism of 1- β -D-Arabinofuranosylcytosine in Rats by Thymidine Pretreatment.** Lynn L. Danhauser and Youcef M. Rustum.
- 2008 **Oxygen Dependence of Hematoporphyrin Derivative-induced Photoinactivation of Chinese Hamster Cells.** James B. Mitchell, Scott McPherson, William DeGraff, Janet Gamson, Alan Zabel and Angelo Russo.
- * 2012 **Response of Nude Mouse-grown Human Urothelial Cancer to *cis*-Diamminedichloroplatinum(II), Diammine[1,1-cyclobutanedicarboxylato(2-)-O,O'-platinum], and Mitoguazone Dihydrochloride.** Andreas P. Kyriazis, Alan Yagoda, Aikaterini A. Kyriazis and Jørgen Fogh.
- 2016 **Development of Thermotolerance in Mouse Fibroblast LM Cells with Modified Membranes and after Procaine Treatment.** Antonius W. T. Konings.
- 2020 **Effect of Phenobarbital and Other Liver Monooxygenase Modifiers on Dimethylnitrosamine-induced Alkylation of Rat Liver Macromolecules.** Michael Schwarz, Albrecht Buchmann, Helmut Klormann, Dieter Schrenk and Werner Kunz.

- 2025 Prediction of *in Vivo* Tumor Response to Chemotherapeutic Agents by the *in Vitro* Sister Chromatid Exchange Assay.** Philip J. Tofilon, Ivan Basic and Luka Milas.
- *2031 Immunological and Biological Stability of Immunotoxins *in Vivo* Studied by the Clearance of Disulfide-linked Pokeweed Antiviral Protein-Antibody Conjugates from Blood.** S. Ramakrishnan and L. L. Houston.
- 2037 Pharmacokinetics of Tiazofurin in the Plasma and Cerebrospinal Fluid of Rhesus Monkeys.** John J. Grygiel, Frank M. Balis, Jerry M. Collins, Cynthia M. Lester and David G. Poplack.
- *2040 Triggering of DNA Strand Breaks by 45°C Hyperthermia and Its Influence on the Repair of γ -Radiation Damage in Human White Blood Cells.** R. E. J. Mitchel and H. C. Birnboim.
- 2046 Chromatin Degradation in Isolated Nuclei of Normal and Transformed Baby Hamster Kidney Cells.** P. A. Dijkwel and F. Wanka.
- 2050 Biological Properties of N^4 - and N^1,N^6 -Spermidine Derivatives in Cultured L1210 Leukemia Cells.** Carl W. Porter, Paul F. Cavanaugh, Jr., Neal Stolowich, B. Ganis, E. Kelly and Raymond J. Bergeron.
- *2058 Lysis of Tumor Cells by Human Blood Monocytes by a Mechanism Independent of Activation of the Oxidative Burst.** Eugenie S. Kleinerman, Lisa M. Ceccorulli, E. Bonvini, R. Zicht and J. I. Gallin.
- *2065 Switch in Differentiative Response to Maturation Inducers of Human Promyelocytic Leukemia Cells by Prior Exposure to Alkaline Conditions.** Steven A. Fischkoff and Margaret E. Condon.
- 2070 Multistep Change in Epidermal Growth Factor Receptors during Spontaneous Neoplastic Progression in Chinese Hamster Embryo Fibroblasts.** E. Wakshull, Paul M. Kraemer and Walker Wharton.
- 2076 Kinetics of Formation and Persistence of Ethylguanines in DNA of Rats and Hamsters Treated with Diethylnitrosamine.** Richard A. Becker and Ronald C. Shank.
- *2085 4,6-Benzylidene-D-glucose, a Benzaldehyde Derivative That Inhibits Protein Synthesis but not Mitosis of NHIK 3025 Cells.** Erik O. Pettersen, John M. Dornish and Øystein W. Rønning.
- *2092 Reversible Effects of Retinoic Acid on Glycosaminoglycan Synthesis during Differentiation of HL-60 Leukemia Cells.** Michael Reiss, Charles A. Maniglia and Alan C. Sartorelli.
- 2098 Control of *Polyomavirus* T-Antigen and DNA Synthesis in Mouse Embryo Fibroblast Cells by Vitamin A.** Jeffry K. Russell and J. Edwin Blalock.
- *2103 Lidocaine Potentiation of Bleomycin A_2 Cytotoxicity and DNA Strand Breakage in L1210 and Human A-253 Cells.** John S. Lazo, I. Deborah Braun, Borislav Meandžija, Katherine A. Kennedy, Esther T. Pham and Laurie F. Smaldone.
- *2110 Radiation Survival Parameters of Antineoplastic Drug-sensitive and -resistant Human Ovarian Cancer Cell Lines and Their Modification by Buthionine Sulfoximine.** Karen G. Louie, Brent C. Behrens, Timothy J. Kinsella, Thomas C. Hamilton, Karen R. Grotzinger, Wilma M. McKoy, Margaret A. Winker, Robert C. Young and Robert F. Ozols.
- *2116 Substrate Specificity of Human Liver Cytochrome P-450 Debrisoquine 4-Hydroxylase Probed Using Immunochemical Inhibition and Chemical Modeling.** Thomas Wolff, Linda M. Distlerath, Mark T. Worthington, John D. Groopman, George J. Hammons, Fred F. Kadlubar, Russell A. Prough, Martha V. Martin and F. Peter Guengerich.
- 2123 Inhibitors of Poly(Adenosine Diphosphoribose) Synthetase, Examination of Metabolic Perturbations, and Enhancement of Radiation Response in Chinese Hamster Cells.** E. Ben-Hur, Chia-Chieh Chen and M. M. Elkind.
- *2128 Growth Kinetics of Human Colorectal Carcinoma.** David M. Ota and Benjamin Drewinko.
- *2132 Chemosensitization of Cultured Human Carcinoma Cells to 1,3-Bis(2-chloroethyl)-1-nitrosourea by Difluoromethylornithine-induced Polyamine Depletion.** Jerome Seidenfeld and Katherine A. Komar.
- 2139 Suppressor Macrophages in Tumor-bearing Mice and Their Selective Inhibition by 6-Mercaptopurine.** Tateshi Kataoka and Fujiko Oh-hashii.
- *2145 Application of a Human Tumor Colony-forming Assay to New Drug Screening.** Robert H. Shoemaker, Mary K. Wolpert-DeFilippes, David H. Kern, Michael M. Lieber, Robert W. Makuch, Nannette R. Melnick, William T. Miller, Sydney E. Salmon, Richard M. Simon, John M. Venditti and Daniel D. Von Hoff.
- *2154 Stability, Targeting, and Biodistribution of Scandium-46- and Gallium-67-labeled Monoclonal Antibody in Erythroleukemic Mice.** Wendie T. Anderson and Mette Strand.
- 2159 Formation of Cadaverine as an Effect of α -Difluoromethylornithine on Chick Embryo Fibroblasts Transformed by Rous Sarcoma Virus.** Uriel Bachrach and Atalia Shtorch.
- 2165 Tumorigenicity in Nude Mice of Dexamethasone-sensitive and -resistant, Differentiated and Dedifferentiated Hepatoma Cells.** Zsuzsanna Bösze and Anikó Venetianer.
- 2170 Selective Phosphorylation of Cytosol Proteins Associated with Transformation and Restoration of Normal Phenotype in AKR Mouse Embryo Fibroblasts.** Subhas Chakrabarty, Yih Jan, Julie Son, Charles A. Miller and Michael G. Brattain.
- *2177 Inhibition of DNA Ligase from Human Thymocytes and Normal or Leukemic Lymphocytes by Antileukemic Drugs.** Jean-Claude David, Thérèse Bassez, Micheline Bonhomme and Régine Rusquet.

- 2184** **Carcinogenesis by Nonmutagenic Chemicals: Early Response of Rat Liver Cells Induced by Methapyri-
lene.** P. Thomas Iype, Corazon D. Bucana and Susan P. Kelley.
- *2192** **Neuroendocrine Differentiation Antigen on Human Lung Carcinoma and Kulchitski Cells.** Lou de Leij, Sybrand Poppema, Jenneke Klein Nulend, Anita ter Haar, Edwin Schwander, Frits Ebbens, Piet E. Postmus and T. Hauw The.
- *2201** **Varying Degrees of Amplification of the N-ras Oncogene in the Human Breast Cancer Cell Line MCF-7.** Kathryn A. Graham, Carol L. Richardson, Mark D. Minden, Jeffrey M. Trent and Ronald N. Buick.
- 2206** **An Experimental Rat Model of Local Bone Cancer Invasion and Its Responsiveness to Ethane-1-hydroxy-1,1-bis(phosphonate) (Etidronate).** Amalia Guitani, Massimo Sabatini, Giovanni Coccioli, Silvia Cristina, Silvio Garattini and Ivan Bartošek.
- 2210** **Monoclonal Antibodies to Cell Surface Antigens Shared by Chemically Induced Mouse Bladder Carcinomas.** Ingegerd Hellström, Karl Erik Hellström, Nicola Rollins, Victor K. Lee, Kelly L. Hudkins and Gerald Nepom.
- 2219** **Correlation of Initiating Potency of Skin Carcinogens with Potency to Induce Resistance to Terminal Differentiation in Cultured Mouse Keratinocytes.** Anne E. Kilkenny, David Morgan, Edwin F. Spangler and Stuart H. Yuspa.
- 2226** **Immunological Approaches to the Purification of Putative Premalignant Hepatocytes from Genotypic Mosaic Rat Livers.** John M. Hunt, Mark T. Buckley, Brian A. Laishes and Harold A. Dunsford.
- 2234** **Effect of Estramustine Phosphate on the Assembly of Isolated Bovine Brain Microtubules and Fast Axonal Transport in the Frog Sciatic Nerve.** Martin Kanje, Johanna Deinum, Margareta Wallin, Per Ekström, Anders Edström, and Beryl Hartley-Asp.
- 2240** **Induction of Thermotolerance and Heat Shock Protein Synthesis in Normal and Respiration-deficient Chick Embryo Fibroblasts.** Jacques Landry, Pierre Chrétien, Jean-Marc de Muys and Réjean Morais.
- *2248** **Identification of Endogenous Inhibitory Growth Factors from a Human Colon Carcinoma Cell Line.** Alan E. Levine, L. J. McRae, David A. Hamilton, Diane E. Brattain, Lynn C. Yeoman and Michael G. Brattain.
- *2255** **Alterations in Expression and Synthesis of Glycolipid Antigens in Human Colonic Tumor Cell Lines.** Vis A. Liepkalns, Eugenia Herrero-Zabaleta, Marie Claude Fondaneche and Pierre Burtin.
- 2264** **Increased Synthesis of Acid-soluble Nuclear Material in Spleens of Tumor-bearing BALB/c Mice.** Louise T. Mashburn.
- 2270** **Coordinate Inhibition of Plasminogen Activator and Tumor Growth by Hydrocortisone in Mouse Mammary Carcinoma.** Rafael Mira-y-Lopez, E. Reich, Robert L. Stolfi, Daniel S. Martin and Liliana Ossowski.
- *2277** **Chromatin-associated Protein Kinases in Human Normal and Benign Hyperplastic Prostate.** Ahmed Rayan, Said A. Goueli, Paul Lange and Khalil Ahmed
- 2283** **Double Labeling of S-Phase Murine Cells with Bromodeoxyuridine and a Second DNA-specific Probe.** Azra Raza, Charalampos Spiridonidis, Kalust Ucar, George Mayers, Richard Bankert and Harvey D. Preisler.
- 2288** **Binding of Formyl Peptides to Walker 256 Carcinosarcoma Cells and the Chemotactic Response of These Cells.** David C. Rayner, F. William Orr and Robert P. C. Shiu.
- 2294** **Secretion of a Cysteine Proteinase from a Hormone-independent Cell Population of Cultured Explants of Murine Mammary Gland.** Anneliese D. Recklies, Chantal White, Jane Mitchell and A. Robin Poole.
- 2302** **Characterization of a Cysteine Proteinase Secreted by Mouse Mammary Gland.** Anneliese D. Recklies and John S. Mort.
- 2308** **Control of Growth, Morphology, and Alkaline Phosphatase Activity by Butyrate and Related Short-Chain Fatty Acids in the Retinoid-responsive 9-1C Rat Prostatic Adenocarcinoma Cell.** David H. Reese, Howard G. Gratzner, Norman L. Block and Victor A. Politano.
- *2314** **Regulation of Plasminogen Activator Activity in Human Fibroblastic Cells by Fibrosarcoma Cell-derived Factors.** Olli Saksela, Marikki Laiho and Jorma Keski-Oja.
- 2320** **Induction of Chromosomal Damage in Chinese Hamster Ovary Cells by Soluble and Particulate Nickel Compounds: Preferential Fragmentation of the Heterochromatic Long Arm of the X-Chromosome by Carcinogenic Crystalline NiS Particles.** Pramila Sen and Max Costa.
- 2326** **Carbamoylation of Glutathione Reductase and Changes in Cellular and Chromosome Morphology in a Rat Cell Line Resistant to Nitrogen Mustards but Collaterally Sensitive to Nitrosoureas.** Kenneth D. Tew, Gregg Kyle, Alfred Johnson and Ann Wang.
- *2334** **Analysis of Commitment of Human Leukemia HL-60 Cells to Terminal Granulocytic Maturation.** Asterios S. Tsiftoglou, Willie Wong, Ronald Hyman, Mark Minden and Stephen H. Robinson.
- *2340** **Relationship of Histology of Wilms' Tumor to Growth Characteristics of Nude Mouse Heterotransplants.** Herman Yeger, Reuben Baumal, Gladys Pawlin and M. James Phillips.
- *2350** **Histochemical and Immunohistochemical Characterization of Surgically Resected and Heterotransplanted Wilms' Tumor.** Herman Yeger, Reuben Baumal, Dennis Bailey, Gladys Pawlin and M. James Phillips.
- *2358** **Identification of Two Different Surface Epitopes of Human Ovarian Epithelial Carcinomas by Monoclonal Antibodies.** Yoshiyuki Tsuji, Toshiyuki Suzuki, Haruhiko Nishiura, Tadashi Takemura and Shinzo Isojima.

- *2363 Induced Secretion of a M, 46,000 Protein by Cultured Human Hepatoma Cells Treated with Tumor Promoters.** Yoshihiro Yoneda, Hirota Fujiki, Richard E. Moore and Tsuyoshi Uchida.

CLINICAL AND EPIDEMIOLOGICAL INVESTIGATIONS

- 2369 Serum Vitamin Levels and the Risk of Cancer of Specific Sites in Men of Japanese Ancestry in Hawaii.** Abraham M. Y. Nomura, Grant N. Stemmermann, Lance K. Heilbrun, R. M. Salkeld and J. P. Vuilleumier.
- 2373 Pharmacokinetics of 1- β -D-Arabinofuranosylcytosine 5'-Triphosphate in Leukemic Cells after Intravenous and Subcutaneous Administration of 1- β -D-Arabinofuranosylcytosine.** Jan O. Liliemark, Christer Y. Paul, C. Gösta Gahrton and Curt O. Peterson.
- 2376 Radioimmunoimaging in Malignant Melanoma with ¹¹¹In-labeled Monoclonal Antibody 96.5.** James L. Murray, Michael G. Rosenblum, Robert E. Sobol, Richard M. Bartholomew, Carl E. Plager, Thomas P. Haynie, Monroe F. Jahns, Howard J. Glenn, Lamk Lamki, Robert S. Benjamin, Nicholas Papadopoulos, Arthur W. Boddie, James N. Frincke, Gary S. David, Dennis J. Carlo and Evan M. Hersh.
- 2382 Pharmacokinetics of ¹¹¹In-labeled Anti-p97 Monoclonal Antibody in Patients with Metastatic Malignant Melanoma.** Michael G. Rosenblum, James L. Murray, Thomas P. Haynie, Howard J. Glenn, Monroe F. Jahns, Robert S. Benjamin, James M. Frincke, Dennis J. Carlo and Evan M. Hersh.

* * *

Letters to the Editor

- 2387 Bioavailability of Bromodeoxyuridine in Dogs and Toxicity in Rats.** Surasak Phuphanich and Victor A. Levin.

- 2390 Stability of the "Second Stage" Promoter 12-O-Retinoylphorbol-13-acetate.** G. L. Tremp and E. Hecker.

Meeting Reports

- 2392 Fourth Annual Sapporo Cancer Seminar: Viral Transforming Genes and Oncogenes—Origin, Structure, and Function.** Fred Rapp and Peter K. Vogt.

- 2395 Cellular and Molecular Mechanisms of Cell Transformation and Standardization of Transformation Assays of Established Cell Lines for the Prediction of Carcinogenic Chemicals: Overview and Recommended Protocols.** IARC/NCI/EPA Working Group.

- 2400 Special Announcement**

- 2401 Announcements**

- 2402 Recent Deaths**

- 2402 Erratum**
M. J. Mass *et al.*, 44: 5688–5691, 1984.

- 2403 Author Index**

Please note important changes in our "Instructions for Authors" in the January 1985 issue:
p. 473—new manuscript processing fee
p. 474—new style for References section

Cancer Research

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

45 (5)

Cancer Res 1985;45:1917-2402.

Updated version	Access the most recent version of this article at: http://cancerres.aacrjournals.org/content/45/5.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/45/5.citation . Click on "Request Permissions" which will take you to the Copyright Clearance Center's (CCC) Rightslink site.