



## CONTENTS

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

### BASIC SCIENCES

- 3471 **Prometheus and Pandora—Cancer Research on Our Diamond Anniversary: Presidential Address.** Sidney Weinhouse.
- 3475 **Disposition and Metabolism of the Carcinogen Reduced Michler's Ketone in Rats.** Dennis J. McCarthy, Robert F. Struck, Tzu-Wen Shih, William J. Suling, Donald L. Hill, and Steven E. Enke.
- 3480 **Role of Depurination in Mutagenesis by Chemical Carcinogens.** Roeland M. Schaaper, Barry W. Glickman, and Lawrence A. Loeb.
- 3486 **Predominance of a Cell Population Less Sensitive to Carcinogenesis in Neoplastic Cells of 3-Methylcholanthrene-induced Tumors in Mouse Aggregation Chimeras.** Leonilla Elbling and Georg Sauermann.
- 3492 **Role of Estrogen and Prolactin in the Growth and Receptor Levels of *N*-Nitrosomethylurea-induced Rat Mammary Tumors.** Andrea Manni, John Rainieri, Baha'uddin M. Arafah, Hugh M. Finegan, and Olof H. Pearson.
- 3496 **Specific High-Affinity Binding of the Phorbol Ester Tumor Promoter 12-*O*-Tetradecanoylphorbol-13-acetate to Isolated Nuclei and Nuclear Macromolecules in Mouse Epidermis.** Frank W. Perrella, Curtis L. Ashendel, and R. K. Boutwell.
- \*3502 **Bleomycin-induced Increase of Collagen Turnover in IMR-90 Fibroblasts: An *in Vitro* Model of Connective Tissue Restructuring during Lung Fibrosis.** Kenneth M. Sterling, Jr., Thomas A. DiPetrillo, John P. Kotch, and Kenneth R. Cutroneo.
- \*3507 **Cysteamine *S*-Phosphate Hydrolysis by Pure Human Alkaline Phosphatases and by Sera from Patients with Lymphoproliferative Disorders.** Anita L. Gainer and Robert A. Stinson.
- 3510 **Metabolism of Testosterone by GR Mouse Mammary Tumors.** Yusuf J. Abul-Hajj and David T. Kiang.
- 3514 **Enhancing Activity of Various Immunoaugmenting Agents on the Delayed-Type Hypersensitivity Response in Mice.** Anna Bartocci, Elizabeth L. Read, Roy D. Welker, Erich Schlick, Vasilios Papademetriou, and Michael A. Chirigos.
- 3519 **Differential Effects of Retinoic Acid and 7,8-Benzoflavone on the Induction of Mouse Skin Tumors by the Complete Carcinogenesis Process and by the Initiation-Promotion Regimen.** Ajit K. Verma, Elizabeth A. Conrad, and R. K. Boutwell.
- 3526 **Purification and Properties of Inorganic Pyrophosphatase of Rat Liver and Hepatoma 3924A.** Chiaki Yoshida, Harshida Shah, and Sidney Weinhouse.
- \*3532 **CC-1065 (NSC 298223), a Most Potent Antitumor Agent: Kinetics of Inhibition of Growth, DNA Synthesis, and Cell Survival.** Bijoy K. Bhuyan, Kenneth A. Newell, Sheri L. Crampton, and Daniel D. Von Hoff.
- 3538 **Vitamin B<sub>6</sub> Metabolism in Liver and Liver-derived Tumors.** Natalie T. Meisler, Louise M. Nutter, and John W. Thanassi.
- 3544 **Nickel Distribution and DNA Lesions Induced in Rat Tissues by the Carcinogen Nickel Carbonate.** Richard B. Ciccarelli and Karen E. Wetterhahn.
- 3550 **Modulation of 1- $\beta$ -D-Arabinofuranosylcytosine Metabolism and Cytotoxicity in L1210 Cells by Fluoropyrimidine Pretreatment.** Steven Grant and Ed Cadman.
- 3557 **Alterations in Hepatic and Splenic Microsomal Electron Transport System Components, Drug Metabolism, Heme Oxygenase Activity, and Cytochrome P-450 Turnover in Murphy-Sturm Lymphosarcoma-bearing Rats.** Brent A. Schacter and Pat Kurz.
- 3565 **Actions of *cis*-Diamminedichloroplatinum on Cell Surface Nucleic Acids in Cancer Cells as Determined by Cell Electrophoresis Techniques.** David A. Juckett and Barnett Rosenberg.
- 3574 **Differential Effects of Anthracycline Drugs on Rat Heart and Liver Microsomal Reduced Nicotinamide Adenine Dinucleotide Phosphate-dependent Lipid Peroxidation.** Edward G. Mimnaugh, Michael A. Trush, Erika Ginsburg, and Theodore E. Gram.
- 3583 **Digitized Video Fluorescence Microscopy Studies of Adriamycin Interaction with Single P388 Leukemic Cells.** Saul Yanovich and Robert N. Taub.
- 3587 **Induction of Ornithine Decarboxylase Activity in Mouse Urinary Bladder by *L*-Tryptophan and Some of Its Metabolites.** Masahiro Matsushima, Sadamu Takano, Erdoğan Ertürk, and George T. Bryan.
- 3592 **Potentialiation of the Antimitochondrial and Antiproliferative Effects of Bis(guanylhydrazones) by Phenethylbiguanide.** Janusz Z. Byczkowski, Lech Zychlinski, and Carl W. Porter.
- 3596 **Effect of Fatty Acid Modification of Cultured Hepatoma Cells on Susceptibility to Natural Killer Cells.** Tai-June Yoo, Chao-Ying Kuo, Arthur A. Spector, Gerene M. Denning, Raechel Floyd, Stephen Whiteaker, Heidi Kim, Jim Kim, Mohamet Abbas, and Thomas W. Budd.

- 3601** **Suppression of the Cytotoxic Response of Mouse Lymphocytes to Syngeneic Tumor Cells by Tumor-promoting Phorbol Ester.** Gay G. Fredrickson and Michael Bennett.
- 3607** **Cross-Reacting Antigens on L5178Y Cells Which Serve as Targets for Cytotoxic T-Lymphocyte Lysis during Establishment of the Tumor Dormant State.** Kent J. Weinhold and E. Frederick Wheelock.
- 3617** **Inhibition of Concanavalin A Response during Osteopetrosis Virus Infection.** Joseph A. Price and Ralph E. Smith.
- 3625** **Effect of Cellular Fatty Acid Alteration on Hyperthermic Sensitivity in Cultured L1210 Murine Leukemia Cells.** M. Michael Guffy, Jay A. Rosenberger, Ido Simon, and C. Patrick Burns.
- 3631** **Comparison of the Effects of Dihydroxyanthraquinone and Adriamycin on the Survival of Cultured Chinese Hamster Cells.** Bruce F. Kimler and C. C. Cheng.
- 3637** **Correlation of Cytotoxicity with Total Intracellular Exposure to 9- $\beta$ -D-Arabinofuranosyladenine 5'-Triphosphate.** Donna S. Shewach and William Plunkett.
- 3642** **Feeding Response of Tumor-bearing Rats to Insulin and Insulin Withdrawal and the Contribution of Autonomous Tumor Drain to Cachectic Depletion.** S. D. Morrison.
- 3648** **Teniposide (VM-26)- and Etoposide (VP-16-213)-induced Augmentation of Methotrexate Transport and Polyglutamylation in Ehrlich Ascites Tumor Cells *in Vitro*.** Jack C. Yalowich, David W. Fry, and I. David Goldman.
- 3654** **Origin of Excess Urinary Nitrate in the Rat.** James P. Witter, Edward Balish, and S. John Gatley.
- 3659** **Linear Dose-Response Curve for the Hepatic Macromolecular Binding of Aflatoxin B<sub>1</sub> in Rats at Very Low Exposures.** B. Scott Appleton, M. P. Goetchius, and T. C. Campbell.
- 3663** **Regression of Canine Mammary Carcinoma after Immunoabsorption Therapy.** Thomas V. Holohan, Terence M. Phillips, Charles Bowles, and Albert Deisseroth.
- 3669** **Induction of Ornithine Decarboxylase in Hamster Tracheal Epithelial Cells Exposed to Asbestos and 12-O-Tetradecanoylphorbol-13-acetate.** Joanne M. Landesman and Brooke T. Mossman.
- \*3676** **Effects of Cyclophosphamide and Polycyclic Aromatic Hydrocarbons on Cell Growth and Mixed-Function Oxidase Activity in a Human Colon Tumor Cell Line.** Wan Fen Fang and Henry W. Strobel.
- 3682** **General Process of Induction of Squamous Metaplasia by Cyclic Adenine Nucleotide and Prostaglandins: Mouse Prostate Glands.** Frederick V. Schaefer, R. Philip Custer, and Sam Sorof.
- 3688** **Protective Role of Thiols in Cyclophosphamide-induced Urotoxicity and Depression of Hepatic Drug Metabolism.** Michael J. Berrigan, Anthony J. Marinello, Zlatko Pavelic, Cynthia J. Williams, Robert F. Struck, and Hira L. Gurtoo.
- \*3696** **Xenografts of Human Bladder Cancer in Immune-deprived Mice.** Asya Kovnat, Margaret Armitage, and Ian Tannock.
- \*3704** **High-Density Lipoproteins and the Proliferation of Human Tumor Cells Maintained on Extracellular Matrix-coated Dishes and Exposed to Defined Medium.** D. Gospodarowicz, G.-M. Lui, and R. Gonzalez.
- \*3714** **Monoclonal Antibodies to a Human Prostate Antigen.** Arthur E. Frankel, Robert V. Rouse, Ming C. Wang, T. Ming Chu, and Leonard A. Herzenberg.
- 3719** **Biological Characterization of the C-1300 Murine Neuroblastoma: An *in Vivo* Neural Crest Tumor Model.** Gerard Pons, Robert F. O'Dea, and Bernard L. Mirkin.
- \*3724** **Unique Cell Surface Glycoprotein Expression in Hairy Cell Leukemia: Effect of Phorbol Ester Tumor Promoters on Surface Glycoproteins, Cell Morphology, and Adherence.** Michael W. Lockney, Harvey M. Golomb, and Glyn Dawson.
- 3729** **Separation and Characterization of Neoplastic Cell Subpopulations of a Transplantable Rat Pancreatic Acinar Carcinoma.** Michael J. Becich and Janardan K. Reddy.
- 3741** **Seasonal and Geographical Changes of Spontaneous Skin Papillomas in the Japanese Newt *Cynops pyrrhogaster*.** Makoto Asashima, Shinji Komazaki, Chikako Satou, and Tsutomu Oinuma.
- 3747** **Increased Uridine Diphosphate-Glucuronyltransferase Activity in Preneoplastic Liver Nodules and Morris Hepatomas.** Karl Walter Bock, Werner Lilienblum, Hugo Pfeil, and Lennart C. Eriksson.
- \*3753** **Biochemical Basis for the Differential Sensitivity of Human T- and B-Lymphocyte Lines to 5-Fluorouracil.** Anita A. Piper and Richard M. Fox.
- 3761** **Inhibition of Dimethylnitrosamine Metabolism by Some Heterocyclic Compounds and by Substrates and Inhibitors of Monoamine Oxidase in the Rat.** John C. Phillips, Christine Bex, Brian G. Lake, Richard C. Cottrell, and Sharat D. Gangolli.
- 3766** **Molecular Structure of ( $\pm$ )-7,8,9,10-Tetrahydroxy-7-,8,9,10-tetrahydrobenzo(a)pyrene Determined by X-Ray Crystallography.** S. Neidle, A. Subbiah, R. Kuroda, and C. S. Cooper.
- 3769** **Partial Circumvention of Resistance to 6-Mercaptopurine by Acylated P<sup>1</sup>,P<sup>2</sup>-Bis(6-mercaptopurine-9- $\beta$ -D-ribofuranoside-5') Pyrophosphate Derivatives.** David M. Tidd, Ian Gibson, and Peter D. G. Dean.
- 3776** **Heterogeneity of the Growth and Metastatic Behavior of Cloned Cell Lines Derived from a Primary Rhabdomyosarcoma.** Fergus L. Sweeney, Jacques Pot-Deprun, Marie-France Poupon, and I. Chouroulinkov.
- \*3783** **DNA Damage and Selective Toxicity of Dopa and Ascorbate:Copper in Human Melanoma Cells.** P. G. Parsons and L. E. Morrison.
- \*3789** **Growth State-specific Responsiveness of Primary Cultures of a Nude Mouse-xenografted Human Colon Carcinoma to 4'-Deoxydoxorubicin and a Crude Human Leukocyte  $\alpha$ -Interferon Preparation.** Jürgen van der Bosch and Karimullah A. Zirvi.

- \*3793** *In Vitro* Responses of Nude Mouse-xenografted Human Colon Carcinomas Exposed to Doxorubicin Derivatives in Tissue Culture and in the Mouse. Karimullah A. Zirvi, Jürgen van der Bosch, and Nathan O. Kaplan.
- 3798** Accumulation and Release of Vinblastine and Vincristine by HeLa Cells: Light Microscopic, Cinematographic, and Biochemical Study. Anneliese M. Lengsfeld, Joseph Dietrich, and Brigitte Schultze-Maurer.
- 3806** Necessity of Bile for and Lack of Inhibitory Effect of Retinoid on Development of Forestomach Papillomas in Nontreated Mutant Mice of the *W/W<sup>v</sup>* Genotype. Masao Yokoyama, Yukihiko Kitamura, Takashi Kohroggi, and Isao Miyoshi.
- \*3810** Inhibition of DNA Replication and Growth of Several Human and Murine Neoplastic Cells by Aphidicolin without Detectable Effect upon Synthesis of Immunoglobulins and HLA Antigens. Guido Pedrali-Noy, Mariacarla Belvedere, Tiziana Crepaldi, Federico Focher, and Silvio Spadari.
- 3814** Dose- and Cell Cycle-dependent *O*<sup>6</sup>-Methylguanine Elimination from DNA in Regenerating Rat Liver after [<sup>14</sup>C]Dimethylnitrosamine Injection. H. M. Rabes, R. Wilhelm, R. Kerler, and G. Rode.
- \*3822** S-Adenosylhomocysteine Hydrolase Inhibition in Deoxyadenosine-treated Human T-Lymphoblasts and Resting Peripheral Blood Lymphocytes. Richard F. Kefford, Megan A. Helmer, and Richard M. Fox.
- 3828** Expression of Type C Viral Glycoproteins on P815 Cells: Higher Expression of *M*, 70,000 Glycoprotein-containing Glycoprotein on Immunogenic Variants. P. C. Jacquemin.
- 3837** Distribution and Metabolism of 1-Propyl-1-nitrosourea in Rats. Akira Tanaka and Mitsuo Watanabe.
- \*3843** Phorbol Ester-induced Differentiation of Human T-Lymphoblastic Cell Line HPB-ALL. Yoshinobu Nakao, Shuichi Matsuda, Takuo Fujita, Shaw Watanabe, Shigeru Morikawa, Takahiko Saita, and Yohei Ito.
- 3851** Tumoricidal Effect of Macrophages Exposed to Adriamycin *In Vivo* or *In Vitro*. François Martin, Anne Caignard, Olivier Olsson, Jean François Jeannin, and Annick Leclerc.
- \*3858** Growth of Human Hepatoma Cell Lines with Differentiated Functions in Chemically Defined Medium. Hidekazu Nakabayashi, Kazuhisa Taketa, Keiko Miyano, Takashi Yamane, and Jiro Sato.

#### CLINICAL INVESTIGATIONS

- 3864** Effect of Diet on Plasma and Urinary Hormones in South African Black Men with Prostatic Cancer. P. Hill, E. L. Wynder, L. Garbaczewski, and A. R. P. Walker.
- 3870** Effects of 12-O-Tetradecanoylphorbol-13-acetate on Fibroblasts from Individuals Genetically Predisposed to Cancer. Michael H. Antecol and Barid B. Mukherjee.
- 3880** Augmentation of Natural Killer Cell Activity after Arterial Embolization of Renal Carcinomas. August Bakke, Jan H. Göthlin, Svein A. Haukaas, and Terje Kalland.
- 3884** Clinical Pharmacology of 9- $\beta$ -D-Arabinofuranosyladenine in Combination with 2'-Deoxycoformycin. Ram P. Agarwal, Julie Blatt, James Miser, Stephen Sallan, Jeffrey M. Lipton, Gregory H. Reaman, John Holcenberg, and David G. Poplack.
- 3887** Pattern of Isoaccepting Transfer RNAs Common to 26 Patients with Hodgkin's Disease. Therese L. Murphy and Ian A. Cooper.
- 3892** Phase I and Pharmacological Study of Acivicin by 24-Hour Continuous Infusion. Geoffrey R. Weiss, J. Patrick McGovren, Debra Schade, and Donald W. Kufe.
- 3896** Clinical and Pharmacological Studies of Methotrexate-Minimal Leucovorin Rescue plus Fluorouracil. Michael C. Wiemann, Frank J. Cummings, Henry G. Kaplan, Ellen N. Spremulli, Charles H. Doolittle, and Paul Calabresi.
- 3901** Special Announcements
- 3904** Announcements
- 3905** Recent Deaths
- 3906** Erratum
- 3907** Books Received
- 3909** Author Index

# Cancer Research

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

## 42 (9)

*Cancer Res* 1982;42:3471-3908.

**Updated version** Access the most recent version of this article at:  
<http://cancerres.aacrjournals.org/content/42/9.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](mailto:pubs@aacr.org).

**Permissions** To request permission to re-use all or part of this article, contact the AACR Publications Department at [permissions@aacr.org](mailto:permissions@aacr.org).