



CONTENTS

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

Perspectives in Cancer Research

- 1735 **Gene Amplification, Drug Resistance, and Cancer.** Robert T. Schimke.

BASIC SCIENCES

- 1743 **Effects of Verapamil on Daunomycin Cellular Retention and Cytotoxicity in P388 Leukemic Cells.** S. Yanovich and L. Preston.
- 1748 **Neocarzinostatin-mediated DNA Damage and Repair in Wild-Type and Repair-deficient Chinese Hamster Ovary Cells.** Wen-Lin Kuo, Raymond E. Meyn, and Charles W. Haidle.
- * 1752 **Effect of Triamcinolone Acetonide on Tyrosinase Activity in a Human Melanoma Cell Line.** Dennis M. DiSorbo, Nancy A. Harris, and Larry Nathanson.
- 1756 **Early Events Leading to Erythroid Differentiation in Mouse Friend Cells Revealed by Cell Fusion Experiments.** Tomoko Kaneko, Shintaro Nomura, and Michio Oishi.
- 1761 **Differential Effect of Hyperthermia on Murine Bone Marrow Normal Colony-forming Unit and AKR and L1210 Leukemia Stem Cells.** M. Flentje, D. Flentje, and S. A. Sapareto.
- 1767 **Effects of the Antitumor Agent 8-Carbamoyl-3-(2-chloroethyl)imidazo[5,1-d]-1,2,3,5-tetrazin-4(3H)-one on the DNA of Mouse L1210 Cells.** Neil W. Gibson, Leonard C. Erickson, and John A. Hickman.
- * 1772 **DNA Cross-Linking and Cytotoxicity in Normal and Transformed Human Cells Treated *in Vitro* with 8-Carbamoyl-3-(2-chloroethyl)imidazo[5,1-d]-1,2,3,5-tetrazin-4(3H)-one.** Neil W. Gibson, John A. Hickman, and Leonard C. Erickson.
- 1776 **Specific Adoptive Immunotherapy with Tumor-specific Cytotoxic T-Lymphocyte Clone for Murine Malignant Gliomas.** Toshiki Yamasaki, Hajime Handa, Junkoh Yamashita, Yoshihiko Watanabe, Yuziro Namba, and Masao Hanaoka.
- 1784 **A New Murine Model System for the *in Vitro* Development of Thymoma Cell Heterogeneity.** Carol L. MacLeod, Ester F. Hays, Robert Hyman, and Suzanne Bourgeois.
- 1791 **Imidazole-resistant Phenotype and Virus Transformation in Cultured Rat Cells.** Kiyonobu Ikezaki, Shin-ichi Akiyama, Chizu Miyazaki, Genki Kimura, and Michihiko Kuwano.
- * 1796 **Biochemical and Cellular Effects of Didemnins A and B.** Sheri L. Crampton, Earl G. Adams, Sandra L. Kuentzel, Li H. Li, Gloria Badiner, and Bijoy K. Bhuyan.
- 1802 **Cycle Progression and Division of Viable and Nonviable Chinese Hamster Ovary Cells following Acute Hyperthermia and Their Relationship to Thermal Tolerance Decay.** Glenn C. Rice, Joe W. Gray, and William C. Dewey.
- * 1809 **Repair of DNA-Protein Cross-Links in an Excision Repair-deficient Human Cell Line and Its Simian Virus 40-transformed Derivative.** Raymond Gantt, William G. Taylor, Richard F. Camalier, and Edward V. Stephens.
- 1813 **Repair of DNA following Incorporation of 1- β -D-Arabinofuranosylcytosine into Herpes Simplex Virus Type I.** Glenn J. Bublely, Clyde S. Crumpacker, and Lowell E. Schnipper.
- 1819 **Time Dependence of the Potentiation of 1,3-Bis(2-chloroethyl)-1-nitrosourea Cytotoxicity Caused by α -Difluoromethylornithine-induced Polyamine Depletion in 9L Rat Brain Tumor Cells.** Leena Alhonen-Hongisto, Dennis F. Deen, and Laurence J. Marton.
- 1823 **Effect of Step-Down Heating on the Cytotoxicity of Adriamycin, Bleomycin, and *cis*-Diamminedichloroplatinum.** T. S. Herman, K. J. Henle, W. A. Nagle, A. J. Moss, and T. P. Monson.
- 1827 **Production of Androgens and Estrogens by Tubular Adenomas Which Developed in Ovaries of Mutant Mice of *Sl/Sl* Genotype.** Nobuyuki Terada, Yukihiro Kitamura, Mikio Namiki, Hideya Kuroda, Mahito Ito, Daishiro Takatsuka, and Keishi Matsumoto.
- 1831 **Comparative Aflatoxin B₁ Mutagenesis of *Salmonella typhimurium* TA100 in Metabolic and Photoactivation Systems.** Hagar Israel-Kalinsky, Lilly Malca-Mor, and Avishay Abraham Stark.
- 1840 **Treatment of Implanted Peritoneal Cancer in Rats by Continuous Hyperthermic Peritoneal Perfusion in Combination with an Anticancer Drug.** Shigemasa Koga, Ryuichi Hamazoe, Michio Maeta, Norio Shimizu, Hiroto Kanayama, and Yukio Osaki.
- * 1843 **Occurrence and Significance of D-Methotrexate as a Contaminant of Commercial Methotrexate.** Steven M. Cramer, Jan H. Schornagel, Krishna K. Kalghatgi, Joseph R. Bertino, and Csaba Horvath.

- 1847 **Incorporation of 5-Fluorouracil into Murine Bone Marrow DNA *in Vivo*.** Robert C. Sawyer, Robert L. Stolfi, Daniel S. Martin, and Sol Spiegelman.
- * 1852 **Potential of 5-Fluoro-2'-deoxyuridine Antineoplastic Activity by the Uridine Phosphorylase Inhibitors Benzylacetylouridine and Benzylxybenzylacetylouridine.** Ming-Yu W. Chu, Fardos N. M. Naguib, Max H. Iltzsch, Mahmoud H. el Kouni, Shih Hsi Chu, Sungman Cha, and Paul Calabresi.
- * 1857 **Activation of Cytotoxic Activity of Human Blood Lymphocytes by Tumor-promoting Compounds.** Oscar F. Ramos, Maria G. Masucci, and Eva Klein.
- 1863 **Effect of Cellular Fatty Acid Alteration on Adriamycin Sensitivity in Cultured L1210 Murine Leukemia Cells.** M. Michael Guffy, James A. North, and C. Patrick Burns.
- 1867 **Arrest of DNA Elongation by DNA Polymerases at Guanine Adducts on 4-Hydroxyaminoquinoline 1-Oxide-modified DNA Template.** Shonen Yoshida, Osamu Koikai, Rika Suzuki, and Mariko Tada.
- 1871 **Immunotherapy with Biochemically Dissociated Fractions of *Propionibacterium acnes* in a Murine Ovarian Cancer Model.** Jonathan S. Berek, John L. Cantrell, Alan K. Lichtenstein, Neville F. Hacker, Reba M. Knox, Roberta K. Nieberg, Thanne Poth, Robert M. Elashoff, Leo D. Lagasse, and Jacob Zigelboim.
- 1876 **Occurrence of Shared Nonviral Tumor-associated Transplantation-Type Antigens among C3H/He Mammary Carcinomas.** Jan Vaage.
- 1880 **Specific Enhancement of Drug Delivery to AKR Lymphoma by Antibody-targeted Small Unilamellar Vesicles.** Katherine K. Matthey, Timothy D. Heath, and Demetrios Papahadjopoulos.
- * 1887 **Suppression of Cross-Link Formation in Chloroethylnitrosourea-treated DNA by an Activity in Extracts of Human Leukemic Lymphoblasts.** Thomas P. Brent.
- 1893 **Metabolic Activation of Carcinogenic Aromatic Amines by Dog Bladder and Kidney Prostaglandin H Synthase.** Ronald W. Wise, Terry V. Zenser, Fred F. Kadlubar, and Bernard B. Davis.
- 1898 **Photoaffinity Labeling of the Sarcoma 180 Cell Surface by Daunomycin.** Gene Yee, Michael Carey, and Thomas R. Tritton.
- 1904 **Self-Consistent-Field Comparative Studies of Some Nitrosoureas and Nitrosamides.** Anne Marie Sapse, Grace Snyder, and Louis Osorio.
- * 1908 **Inhibition by Palmitoylcarnitine of Adhesion and Morphological Changes in HL-60 Cells Induced by 12-O-Tetradecanoylphorbol-13-acetate.** Toshio Nakaki, Shiro Mita, Satoshi Yamamoto, Teruo Nakadate, and Ryuichi Kato.
- 1913 **Effect of Penicillin on the Renal Tubular Secretion of Methotrexate in the Monkey.** Walter M. Williams, Theresa S. Chen, and Kee C. Huang.
- 1918 **Comparison of Serine Palmitoyltransferase in Morris Hepatoma 7777 and Rat Liver.** Robert D. Williams, Daniel W. Nixon, and Alfred H. Merrill, Jr.
- 1924 **Blood Flow in Transplantable Bladder Tumors Treated with Hematoporphyrin Derivative and Light.** Steven H. Selman, Martha Kreimer-Birnbaum, James E. Klaunig, Peter J. Goldblatt, Rick W. Keck, and Steven L. Britton.
- * 1928 **Anticancer Activity of the Structurally Novel Antibiotic CI-920 and Its Analogues.** Wilbur R. Leopold, Joan L. Shillis, Amie E. Mertus, James M. Nelson, Billy J. Roberts, and Robert C. Jackson.
- 1933 **Correlation of Morphological Transformation to Sister Chromatid Exchanges Induced by Split Doses of Chemical or Physical Carcinogens on Cultured Syrian Hamster Cells.** Nicholas C. Popescu, Suzanne C. Amsbaugh, and Joseph A. DiPaolo.
- 1939 **Metabolism of 4'-(9-Acridinylamino)methanesulfonm-anisidide by Rat Liver Microsomes.** D. D. Shoemaker, R. L. Csyk, P. E. Gormley, J. J. V. DeSouza, and L. Malspeis.
- 1946 **Lymphokine-activated Killer Cells: Lysis of Fresh Syngeneic Natural Killer-resistant Murine Tumor Cells by Lymphocytes Cultured in Interleukin 2.** Maury Rosenstein, Ilana Yron, Yael Kaufmann, and Steven A. Rosenberg.
- * 1954 **Reactivity of Monoclonal Antibody F36/22 with Human Ovarian Adenocarcinomas.** Gary A. Croghan, Martin B. Wingate, Marie Gamarra, Edward Johnson, T. Ming Chu, Howard Allen, Luis Valenzuela, Yoshiaki Tsukada, and Lawrence D. Papsidero.
- * 1963 **Correlation of Lactogenic Receptor Concentration in Human Breast Cancer with Estrogen Receptor Concentration.** Liam J. Murphy, Leigh C. Murphy, Elizabeth Vrhovsek, Robert L. Sutherland, and Leslie Lazarus.
- 1969 **Relationship between the Chemical Structure and the Mutagenic and Carcinogenic Potentials of Five Naphthofurans.** Waldo Venegas, Maria Sala, Jean-Pierre Buisson, René Royer, and I. Chouroulinkov.
- 1976 **Oxygen Radical Detoxification Enzymes in Doxorubicin-sensitive and -resistant P388 Murine Leukemia Cells.** A. Ramu, L. Cohen, and D. Glaubiger.
- 1981 **Serial Passage of Tumors in Mice in the Study of Tumor Progression and Testing of Antineoplastic Drugs.** Judith Leibovici.
- 1985 **Effects of 2,4-Dinitrophenol and Other Metabolic Inhibitors on the Thermograms of Ehrlich Ascites Carcinoma Cells Registered with a Microcalorimeter.** Etsuo Ito, Hidekazu Sakihama, Kiyomi Toyama, and Katsuaki Matsui.
- * 1991 **Inhibition of Herpes Simplex Virus Replication by Tobacco Extracts.** Jan-Michaél Hirsch, Bo Svennerholm, and Anders Vahne.

- 1998 **Direct Mitogenic Effects of Insulin, Epidermal Growth Factor, Glucocorticoid, Cholera Toxin, Unknown Pituitary Factors and Possibly Prolactin, but not Androgen, on Normal Rat Prostate Epithelial Cells in Serum-free, Primary Cell Culture.** Wallace L. McKeehan, Pamela S. Adams, and Mary P. Rosser.
- *2011 **Isolation of Urinary Trypsin Inhibitor-like Inhibitor from Human Lung Cancer Tissue.** Tsuneo Okumichi, Masayuki Nishiki, Sumiyoshi Takasugi, Naotika Toki, and Haruo Ezaki.
- *2016 **Immunohistochemical Study of the Expression of Human Milk Fat Globule Membrane Glycoprotein 70.** Ashraf Imam, Clive R. Taylor, and Zoltán A. Tökés.
- 2023 **Phagocytosis and Solubilization of Fixed Cells by Metastatic Hamster Embryo Fibroblasts, Nil2C2.** Hisako Sakiyama, Yoko Nishino, Kazuko Nishimura, Yuko Noda, and Hiroshi Otsu.
- 2033 **Biochemical and Morphological Characterization of Clonal AXC Rat Prostate Cancer Cells.** Sydney A. Shain, Rachel I. Huot, Lester S. Gorelic, and G. Con Smith.
- 2043 **Induction and Repair of DNA Cross-Links in Chinese Hamster Ovary Cells Treated with Various Platinum Coordination Compounds in Relation to Platinum Binding to DNA, Cytotoxicity, Mutagenicity, and Antitumor Activity.** Adrie C. M. Plooy, Margriet van Dijk, and Paul H. M. Lohman.
- *2052 **Analysis of Human Small Cell Lung Cancer Differentiation Antigens Using a Panel of Rat Monoclonal Antibodies.** Steven T. Rosen, James L. Mulshine, Frank Cuttitta, Joseph Fedorko, Desmond N. Carney, Adi F. Gazdar, and John D. Minna.
- 2062 **Persistence of γ -Glutamyl Transpeptidase-positive Foci during Hamster Buccal Pouch Carcinogenesis.** Tetsuyo Odajima, Dennis B. Solt, and Lilian Calderon Solt.
- *2068 **Phenol-soluble Nonhistone Chromatin Proteins in Chronic Lymphocytic Leukemia.** Charlotte A. Jones, Laurie Hesse, Huong Muzik, and L. Martin Jerry.
- *2078 ***In Vivo* Radiolocalization of Antiosteogenic Sarcoma Monoclonal Antibodies in Osteogenic Sarcoma Xenografts.** Takashi Nakamura, Harumi Sakahara, Susumu Hosoi, Takao Yamamuro, Shoichiro Higashi, Haruki Mikawa, Keigo Endo, and Sakuji Toyama.
- *2084 **Induction of Two Estrogen-responsive Proteins by Antiestrogens in R₂₇, a Tamoxifen-resistant Clone of MCF₇ Cells.** Françoise Vignon, Marc E. Lippman, Hajime Nawata, Danielle Derocq, and Henri Rochefort.
- 2089 **Production of Skeletal Muscle Elements by Cell Lines Derived from Neoplastic Rat Mammary Epithelial Stem Cells.** Philip S. Rudland, Damien J. Dunnington, Barry Gusterson, Paul Monaghan, and Christine M. Hughes.
- 2103 **Influence of 1,25-Dihydroxyvitamin D₃ on Cultured Osteogenic Sarcoma Cells: Correlation with the 1,25-Dihydroxyvitamin D₃ Receptor.** Shigeharu Dokoh, Carol A. Donaldson, and Mark. R. Haussler.
- 2110 **Enhancement of Clonal Proliferation of Mouse Mast Cells by a Tumor-promoting Phorbol Ester.** Hirohisa Saito, Yutaka Sanai, Hironori Nakamura, Naohiro Watanabe, Tadaatsu Ito, and Yoshitaka Nagai.
- 2115 **Use of Oily Contrast Medium for Selective Drug Targeting to Tumor: Enhanced Therapeutic Effect and X-Ray Image.** Ken Iwai, Hiroshi Maeda, and Toshimitsu Konno.
- *2122 **Somatomedin-C Receptors and Growth Effects in Human Breast Cells Maintained in Long-Term Tissue Culture.** Richard W. Furlanetto and Joseph N. DiCarlo.
- 2129 **Chemically Induced Differentiation of Murine Embryonal Carcinoma *In Vivo*: Transplantation of Differentiated Tumors.** Wendell C. Speers and Magda Altmann.
- 2136 **Malignant Neoplasms of Differentiated Cells Occurring after Retinoic Acid Treatment of Murine Embryonal Carcinomas *In Vivo*.** Wendell C. Speers and Magda Altmann.
- *2144 **Effects of Human Immune Interferon on Cell Viability, (2',5')Oligoadenylate Synthesis, and Polyamine-dependent Protein Phosphorylation in Human Colon Carcinoma Cells *In Vitro*.** Mrunal S. Chapekar and Robert I. Glazer.
- 2150 **Dose Response, Wavelength Dependence, and Time Course of Ultraviolet Radiation-induced Unscheduled DNA Synthesis in Mouse Skin *In Vivo*.** Ken-ichi Kodama, Takatoshi Ishikawa, and Shozo Takayama.
- 2155 **Expression of Mammary Tumor Virus Proteins in Preneoplastic Outgrowth Lines and Mammary Tumors of BALB/cV Mice.** Betty L. Slagle, Robert E. Lanford, Daniel Medina, and Janet S. Butel.
- 2163 **Antigenic Similarity of Nonhistone Chromosomal Proteins in Cultured Rat Liver Epithelial Cells, Fetal Liver, and Transplantable Tumors.** Warren N. Schmidt, Rex H. McGehee, Tomiko Shimada, Gary M. Williams, and Lubomir S. Hnilica.
- 2170 **Dependence of Asbestos- and Mineral Dust-induced Transformation of Mammalian Cells in Culture on Fiber Dimension.** Thomas W. Hesterberg and J. Carl Barrett.
- 2181 **Restoration of Normal Growth Control and Membrane Antigen Composition in Malignant Cells by *N,N*-Dimethylformamide.** Subhas Chakrabarty, L. J. McRae, Alan E. Levine, and Michael G. Brattain.
- 2186 **Promotion by Orotic Acid of Liver Carcinogenesis in Rats Initiated by 1,2-Dimethylhydrazine.** C. Laurier, M. Tatematsu, Prema M. Rao, S. Rajalakshmi, and D. S. R. Sarma.

CLINICAL INVESTIGATIONS

- 2192 **Study of Ultraviolet Radiation and Genotoxic Effects of Natural Sunlight in Relation to Skin Cancer in Saudi Arabia.** Mohammed A. Hannan, Manik Paul, Magid H. Amer, and Farouk H. Al-Watban.

- 2198 Prognostic Significance of Nuclear DNA Content in Serous Ovarian Tumors.** K. Erhardt, G. Auer, E. Björkholm, G. Forsslund, B. Moberger, C. Silfverswärd, G. Wicksell, and A. Zetterberg.
- 2203 Effect of Very High-Dose Thymidine Infusions on Leukemia and Lymphoma Patients.** Martin S. Blumenreich, Thomas M. Woodcock, Michael Andreeff, Wolfgang Hiddemann, Ting-Chao Chou, Karen Vale, Maureen O'Hehir, Bayard D. Clarkson, and Charles W. Young.
- 2208 A Prospective Study on Primary Gastric Stump Cancer following Partial Gastrectomy for Benign Gastrointestinal Diseases.** Shinkan Tokudome, Suminori Kono, Masato Ikeda, Masanori Kuratsune, Chiaki Sano, Kiyoshi Inokuchi, Yoshifumi Kodama, Hitoshi Ichimiya, Fumio Nakayama, Nobuaki Kaibara, Shigemasa Koga, Hiroyasu Yamada, Taiji Ikejiri, Naokata Oka, and Hironaga Tsurumaru.
- 2213 Lack of Radioimmunodetection and Complications Associated with Monoclonal Anticarcinoembryonic Antigen Antibody Cross-Reactivity with an Antigen on Circulating Cells.** Robert O. Dillman, Jacquelyn C. Beauregard, Robert E. Sobol, Ivor Royston, Richard M. Bartholomew, Phillip S. Hagan, and Samuel E. Halpern.
- 2219 Variations in Committed Stem Cells (CFU-GM and CFU-TL) in the Peripheral Blood of Cancer Patients Treated by Sequential Combination Chemotherapy for Breast Cancer.** F. Rusé-Riol, M. Legros, D. Bernard, J. Chassagne, H. Clavel, J. P. Ferriere, P. Chollet, and R. Plagne.
- 2225 Histological and Ultrastructural Changes in Breast Adenocarcinoma after Treatment with Plasma Perfused over Immobilized Protein A.** Yerach Daskal, Carlos A. Mattioli, Judy Kao-Jen, and David S. Terman.
- 2236 An Unusual Oxygen-sensitive Lactate Dehydrogenase Isozyme Associated with Kirsten Murine Sarcoma Virus in Human Serum.** Victoria R. Polonis, Garth R. Anderson, John Brzykcy, Adrian O. Vladutiu, and Kenneth F. Manly.
- 2240 Radioimmunoassay for Human Pancreatic Ribonuclease and Measurement of Serum Immunoreactive Pancreatic Ribonuclease in Patients with Malignant Tumors.** Minoru Kurihara, Michio Ogawa, Toshiyuki Ohta, Eiji Kurokawa, Takeshi Kitahara, Atsuo Murata, Kazuhiko Matsuda, Goro Kosaki, Takehiko Watanabe, and Hiroshi Wada.
- 2244 Target Organs for Carcinogenicity of Chemicals and Industrial Exposures in Humans: A Review of Results in the IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans.** F. Merletti, E. Heselstine, R. Saracci, L. Simonato, H. Vainio, and J. Wilbourn.
- * * *
- Letters to the Editor**
- 2251 Aspartate Transcarbamylase from Human Tumoral Cell Lines: Accurate Determination of Michaelis Constant for Carbamylphosphate by Intercept Replots.** Jean Baillon, Marcelle Guichard, and Guy Hervé.
- 2253 Phototoxicity of N-2-Hydroxyethylpiperazine-N'-2-ethanesulfonic Acid-buffered Culture Media for Human Leukemic Cell Lines.** G. T. Spierenburg, F. T. J. J. Oerlemans, J. P. R. M. van Laarhoven, and C. H. M. M. de Bruyn.
- 2255 Announcements**
- 2256 Errata**
- 2256 Recent Deaths**
- 2257 Author Index**

Cancer Research

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

44 (5)

Cancer Res 1984;44:1735-2256.

Updated version Access the most recent version of this article at:
<http://cancerres.aacrjournals.org/content/44/5.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/44/5.citation>. Click on "Request Permissions" which will take you to the Copyright Clearance Center's (CCC) Rightslink site.