



CONTENTS

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

BASIC SCIENCES

- 2105 Relationship between Carcinogenicity and *In Vitro* Metabolism of Nitrosomethylethylamine, Nitrosomethyl-*N*-butylamine, and Nitrosomethyl-(2-phenylethyl)amine Labeled with Deuterium in the Methyl and α -Methylene Positions. J. G. Farrelly, M. L. Stewart, J. E. Saavedra, and W. Lijinsky.
- *2110 Non-Glucocorticoid Receptor-mediated Effects of the Potent Glucocorticoid Deacylcortivazol. Jeffrey M. Harmon, Thomas J. Schmidt, and E. Brad Thompson.
- 2115 Antagonism of Concanavalin A Capping in Phorbol Ester-activated Lymphocytes by Calmodulin Inhibitors and Certain Amino Acid Esters. Cheung H. Kwong and Gerald C. Mueller.
- *2121 Degradation of Tumor-associated Antigens Shed by Human Melanoma Cells in Culture. Amal M. Bector and Jean-Claude Bystryn.
- 2126 1-Butanol Extraction and Subsequent Reconstitution of Membrane Components Which Mediate Metastatic Phenotype. Stephen J. LeGrue.
- *2135 Characterization of the Lymphokine Responsible for Migration-inhibitory Activity against Tumor Cells. Marion C. Cohen.
- 2139 Resistance to L1210 Mouse Leukemia Cells in Moderately Protein-malnourished BALB/c Mice Treated *In Vivo* with Thymosin Fraction V. Thomas M. Petro and Ronald R. Watson.
- 2146 Effect of Neoplasms on the Content and Activity of Alkaline Phosphatase and γ -Glutamyl Transpeptidase in Uninvolved Host Tissues. Bogumila Koss and Olga Greengard.
- 2152 Synergistic Effect of Ricin in Combination with Daunorubicin, *cis*-Dichlorodiammineplatinum(II), and Vincristine in Systemic L1210 Leukemia. Øystein Fodstad and Alexander Pihl.
- *2159 Rapid Assay for Evaluating the Chemosensitivity of Human Tumors in Soft Agar Culture. Nobuhiko Tanigawa, David H. Kern, Yorinori Hikasa, and Donald L. Morton.
- 2165 Comparison of Sister Chromatid Exchange Induction and Known Carcinogenic Activities of Vinyl and Allyl Carbamates. Maria Cheng and Mary K. Conner.
- *2168 Activity of *Bis*-Carbamoyloxymethyl Derivatives of Pyrroles and Pyrrolizines against Human Tumor Xenografts in Nude Mice. Wayne K. Anderson.
- 2171 Heat Protection by Glycerol *In Vitro*. Kurt J. Henle and Raymond L. Wartens.
- 2177 Toxicity and Pharmacokinetics of a New Antifolate, 2,4-Diamino-5-adamantyl-6-methylpyrimidine, in Dogs. Sigmund F. Zakrzewski, Zlato Pavelic, William R. Greco, Gary Bullard, Patrick J. Creaven, and Enrico Mihich.
- 2184 Hormone Sensitivity of the R3327-G Rat Prostate Adenocarcinoma: Growth Rate, DNA Content, and Hormone Receptors. Alan Pollack, George L. Irvin, Norman L. Block, Richard M. Lipton, Betty J. Stover, and Alice J. Clafin.
- 2191 Schedule-dependent Synergy and Antagonism between High-Dose 1- β -D-Arabinofuranosylcytosine and Asparaginase in the L5178Y Murine Leukemia. Simeon A. Schwartz, Barry Morgenstern, and Robert L. Capizzi.
- 2198 Generation of Tumor Cells with Reduced DNA Content as a Result of Macrophage Tumoricidal Activity. Kevin M. Connolly and Alan M. Kaplan.
- 2207 Glycosaminoglycan Synthesis by Subpopulations of Epithelial Cells from a Mammary Adenocarcinoma. John C. Angello, Keith G. Danielson, Lawrence W. Anderson, and Howard L. Hosick.
- 2211 Regulation of the Expression of Adoptive Tumor Rejection Immunity by Recipient Cyclophosphamide-sensitive Cells. Cinda M. Boyer, John W. Kreider, and Gerald L. Bartlett.
- *2216 Cytotoxic Antibody Reactivity in Sera of Melanoma Patients against Allogeneic and Autologous Cultured Tumor Cells and Fibroblasts. John M. Brown, Patricia C. Shoffner, S. P. Tondreau, Edwin J. Matthews, William D. Terry, and Steven A. Rosenberg.
- 2223 Dose-related Effects of Psoralen and Ultraviolet Light on the Cell Cycle of Murine Melanoma Cells. Janos M. Varga, Gary Wieseahn, James C. Bartholomew, and John E. Hearst.
- *2227 *In Vitro* Generation of Tumoricidal Properties in Human Alveolar Macrophages following Interaction with Endotoxin. Saburo Sone, Satoru Moriguchi, Eiji Shimizu, Fumitaka Ogushi, and Eiro Tsubura.

- * 2232 Autocatabolism of Surface Macromolecules Shed by Human Melanoma Cells.** Jean-Claude Bystryn and Judith Perlstein.
- 2238 Biological Behavior of MM1 Hamster Melanoma.** Lawrence R. Stanberry, Tapas K. Das Gupta, and Craig W. Beattie.
- 2242 Effect of Adrenal Manipulation on Glucocorticoid Receptors in MM1 Hamster Melanoma.** Lawrence R. Stanberry, W. F. Lindsey, and Craig W. Beattie.
- * 2247 Cellular Hypersensitivity to Neocarzinostatin in Ataxia-Telangiectasia Skin Fibroblasts.** Yosef Shiloh, Einat Tabor, and Yechiel Becker.
- 2250 Enzyme Catalyzation of the Deacylation of N^4 -Acyl Derivatives of 1- β -D-Arabinofuranosylcytosine in the Mouse Liver Microsome.** Takashi Tsuruo, Kazuyoshi Hori, Harumi Iida, Shigeru Tsukagoshi, and Yoshio Sakurai.
- 2255 Estrogen Receptors in Canine Mammary Tumors.** E. G. MacEwen, A. K. Patnaik, H. J. Harvey, and W. B. Panko.
- 2260 Comparison of the Actions of 9- β -D-Arabinofuranosyl-2-fluoroadenine and 9- β -D-Arabinofuranosyladenine on Target Enzymes from Mouse Tumor Cells.** E. Lucile White, Sue C. Shaddix, R. Wallace Brockman, and L. Lee Bennett, Jr.
- 2265 Role of Laminin in the Attachment and Metastasis of Murine Tumor Cells.** V. P. Terranova, L. A. Liotta, R. G. Russo, and G. R. Martin.
- * 2270 Characterization of Transformed Cells and Tumors by Proton Nuclear Magnetic Resonance Spectroscopy.** Carolyn E. Mountford, George Grossman, Gregory Reid, and Richard M. Fox.
- 2277 DNA Damage in Liver, Kidney, Bone Marrow, and Spleen of Rats and Mice Treated with Commercial and Purified Aniline as Determined by Alkaline Elution Assay and Sister Chromatid Exchange Induction.** Silvio Parodi, Mauro Pala, Patrizia Russo, Annalisa Zunino, Cecilia Balbi, Adriana Albin, Federico Valerio, Maria Roberta Cimberle, and Leonardo Santi.
- 2284 Reutilization of Amino-Acid Carbons in Relation to Albumin Turnover in Nongrowing Mice with Sarcoma.** Ingvar Karlberg, Lars Ekman, Staffan Edström, Tore Scherstén, and Kent Lundholm.
- 2289 Correlations between Cell Surface Protease Activities and Abnormalities of Occludens Junctions in Rat Bladder Carcinoma *in Vitro*.** Bendicht U. Pauli and Ronald S. Weinstein.
- 2298 Ultrastructural Abnormalities in Carcinogen-induced Hepatocellular Altered Foci Identified by Resistance to Iron Accumulation.** Norio Hirota and Gary M. Williams.
- * 2310 Identification and Purification of a M_r 75,000 Cell Surface Human Melanoma-associated Antigen.** Joy Heaney-Kieras and Jean-Claude Bystryn.
- * 2317 Immunoreactive Prolactin in Epithelial Cells of Normal and Cancerous Human Breast and Prostate Detected by the Unlabeled Antibody Peroxidase-Antiperoxidase Method.** Dallas M. Purnell, Elizabeth A. Hillman, Barry M. Heatfield, and Benjamin F. Trump.
- 2325 *In Vitro* Cellular Effects of Hematoporphyrin Derivative.** Michael W. Berns, Anton Dahlman, Fred M. Johnson, Robert Burns, Daryn Sperling, Mark Guiltinan, Ann Siemens, Robert Walter, William Wright, Marie Hammer-Wilson, and Alan Wile.
- 2330 Kinetics of Phenotypic Maturation of Remodeling of Hyperplastic Nodules during Liver Carcinogenesis.** Katsuhiko Enomoto and Emmanuel Farber.
- * 2336 Ultrastructural Differentiation in the Nude Mouse of Transformed Cells Isolated from the Human Fetal Pituitary Gland.** Yew Phew See, Anthony M. Sun, Donna J. McComb, Blair Gerrie, and Kalman Kovacs.
- 2344 Divergent Responses in Epidermal Basal Cells Exposed to the Tumor Promoter 12-O-Tetradecanoylphorbol-13-acetate.** Stuart H. Yuspa, Theresa Ben, Henry Hennings, and Ulrike Lichti.
- * 2350 Enhanced Tumor Growth *in Vivo* by a Factor in Human Platelets and Rat Liver.** Elizabeth Witkoski, Nancy Kepner, Kim Leitzel, Cheryl Rogers, Leonard S. Jefferson, and Allan Lipton.
- 2353 Genetic Instability Coupled to Clonal Selection as a Mechanism for Tumor Progression in the Dunning R-3327 Rat Prostatic Adenocarcinoma System.** John T. Isaacs, Norio Wake, Donald S. Coffey, and Avery A. Sandberg.
- 2362 Pyridoxine Resistance in a Rat Hepatoma Cell Line.** Dennis M. DiSorbo, Laurie G. Paavola, and Gerald Litwack.
- 2371 Identification of Tumor-associated Antigens on Ultraviolet Light-induced Tumors Using Antitumor Antibodies Developed in Ascites Fluid.** G. William Fortner, Larry J. Takemoto, Lora Shehi, and Jeffrey S. Hansen.
- 2376 Transplantation of Mouse Mammary Epithelial Cells Grown in Primary Collagen Gel Cultures.** Raphael C. Guzman, Rebecca C. Osborn, Jason Yang, Kenneth B. DeOme, and Satyabrata Nandi.
- 2384 Immunofluorescence Localization of Fibronectin in Chondrosarcoma Cartilage Matrix.** Koji Kimata, Jean-Michel Foidart, John P. Pennypacker, Hynda K. Kleinman, George R. Martin, and A. Tyl Hewitt.
- * 2392 Serum-free Medium for the *in Vitro* Growth of Normal and Malignant Urinary Bladder Epithelial Cells.** Edward M. Messing, John L. Fahey, Jean B. deKernion, S. M. Bhuta, and J. Eric Bubbers.
- 2398 Influence of the Liver on the Profile of Circulating Antigens Recognized by Antiserum against Hepatoma Membrane Glycoproteins.** Heinz Baumann and Darlene Eldredge.

- 2407 Murine Leukemia Virus-mediated Transformation of a Mouse Epithelial Cell Line MMC-E.** Ulf R. Rapp and Jorma Keski-Oja.
- 2412 Antiproliferative Action of a Novel Fluorinated Uridine Analog, 5'-Deoxy-5-fluorouridine, Measured *in Vitro* and *in Vivo* on Four Different Murine Tumor Lines.** Hans-Rudolf Hartmann and Alex Matter.
- 2416 Influence of Temperature on Platinum Binding to DNA, Cell Killing, and Mutation Induction in *Escherichia coli* K-12 Cells Treated with *cis*-Diamminedichloroplatinum(II).** Jaap Brouwer, Anne Marie J. Fichtinger-Schepman, Pieter van de Putte, and Jan Reedijk.
- 2420 Isolation and Partial Identification of Eight Endogenous G₁ Inhibitors of JB-1 Ascites Tumor Cell Proliferation.** Niels Michael Barfod.
- 2426 Promotive Effects of Steroids and Bile Acids on Hepatocarcinogenesis Initiated by Diethylnitrosamine.** Ross G. Cameron, Katsumi Imaida, Hiroyuki Tsuda, and Nobuyuki Ito.
- 2429 Identification of a Fish Protein Associated with a Kinase Activity and Related to the Rous Sarcoma Virus Transforming Protein.** Angelika Barnekow, Manfred Schartl, Fritz Anders, and Heinz Bauer.
- 2434 Biological Characteristics and Estrogen and Progesterone Receptors in Mammary Carcinoma Induced in Male Sprague-Dawley Rats by a Series of Intra-gastric Intubations of 7,12-Dimethylbenz(a)anthracene.** Hiroki Yoshida, Aichi Yoshida, Ryo Fukunishi, Bunzo Sato, Shigeru Okamoto, and Keishi Matsumoto.
- *2440 New Human Papilloma Virus Isolated from Epidermodysplasia Verruciformis Lesions.** M. Yutsudo, T. Tanigaki, T. Tsumori, S. Watanabe, and A. Hakura.
- *2444 Characterization and Use of an Allotype-specific Monoclonal Antibody to Placental Alkaline Phosphatase in the Study of Cancer-related Phosphatase Polymorphism.** José Luis Millán, Torgny Stigbrand, Erkki Ruoslahti, and William H. Fishman.
- 2450 Plasma Membrane Changes of Liver and Morris Hepatoma Induced by Retinol in Rats.** Reinhard Büchsel and Werner Reutter.
- 2457 *Communication: Synthesis and Degradation of Heat Shock Proteins during Development and Decay of Thermotolerance.*** Jacques Landry, Denis Bernier, Pierre Chrétien, Louis M. Nicole, Robert M. Tanguay, and Normand Marceau.
- *2462 *Meeting Report: Carcinogenesis and Gene Expression in Liver Cultures.*** Gary M. Williams and Akira Ichihara.

CLINICAL INVESTIGATIONS

- 2465 Objective Regressions of T- and B-Cell Lymphomas in Patients following Treatment with Anti-thymocyte Globulin.** Richard I. Fisher, Bruce A. Silver, Christian P. Vanhaelen, Elaine S. Jaffe, and Jeffrey Cossman.
- 2470 HLA Antigens in Patients with Germ Cell Cancers of the Testis.** Marilyn S. Pollack, Davor Vugrin, William Hennessy, Harry W. Herr, Bo Dupont, and Willet F. Whitmore, Jr.
- 2474 Human Central Nervous System Distribution of *cis*-Diamminedichloroplatinum and Use as a Radiosensitizer in Malignant Brain Tumors.** David J. Stewart, Milam Leavens, Moshe Maor, Lyn Feun, Mario Luna, Jeanne Bonura, Richard Caprioli, Ti Li Loo, and Robert S. Benjamin.
- 2480 Modulation of Natural Killer Cell-mediated Cytotoxicity by Partially Purified and Cloned Interferon- α .** Eva Lotzová, Cherylyn A. Savary, Jordan U. Gutterman, and Evan M. Hersh.
- 2489 *In Vivo* Nonspecific Macrophage Chemotaxis in Cancer Patients and Its Correlation with Extent of Disease, Regional Lymph Node Status, and Disease-free Survival.** Lucien Israël, Raymond Samak, Richard Edelstein, Jean Amouroux, Jean-Paul Ballesti, and Georges de Saint Florent.
- 2495 Hypogonadism in Male Patients with Metastatic Cancer Prior to Chemotherapy.** Rowan T. Chlebowski and David Heber.
- 2499 Treatment of Small-Cell Carcinoma of the Lung Monitored by Sequential Flow Cytometric DNA Analysis.** Lars L. Vindeløv, Heine H. Hansen, Anders Gersel, Fred R. Hirsch, and Nis I. Nissen.
- 2506 Serum Levels of Carcinoembryonic Antigen and a Tumor-extracted Carcinoembryonic Antigen-related Antigen in Cancer Patients.** John E. Shively, Vickie Spayth, Fong-Fu Chang, Gerald E. Metter, Leonard Klein, Cary A. Presant, and Charles W. Todd.
- 2514 Deoxycytidine and Deoxythymidine Kinase Activities in Plasma of Mice and Patients with Neoplastic Disease.** Willi Kreis, Zalmen Arlin, Alan Yagoda, Brian R. Leyland-Jones, and Lawrence Fiori.
- 2518 Announcements**
- 2519 Recent Deaths**
- 2519 Erratum**
- 2521 Author Index**