



CONTENTS§

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

- *3137 Effect of N^1, N^{14} -Bis(ethyl)homospermine on the Growth of U-87 MG and SF-126 Human Brain Tumor Cells. Hirak S. Basu, Malgorzata Pellarin, Burt G. Feuerstein, Dennis F. Deen, Raymond J. Bergeron, and Laurence J. Marton.
- *3141 An Abnormal Profile of DNA Replication Intermediates in Bloom's Syndrome. Ulf Lönn, Sigrid Lönn, Urban Nylén, Gerard Winblad, and James German.
- *3146 Coordinated Induction of Autocrine Tumor Necrosis Factor and Interleukin 1 in Normal Human Monocytes and the Implications for Monocyte-mediated Cytotoxicity. Diana M. Smith, Gregory A. Lackides, and Lois B. Epstein.
- *3154 Effect of Recombinant Human Interleukin 4 on Human Monocyte Activity. Melissa M. Hudson, Avi B. Markowitz, Jordan U. Gutterman, Rebecca D. Knowles, John S. Snyder, and Eugenie S. Kleinerman.
- 3159 Immune Response to Progressor Variants Derived from Transfection of an Ultraviolet Radiation-induced C3H Mouse Regressor Tumor Cell Line with Activated Harvey-*ras* Oncogene. David S. Kaba, William E. Pierceall, Janet E. Price, and Honnavara N. Ananthaswamy.
- *3167 Mouse-Human Chimeric Antibody against the Multidrug Transporter P-Glycoprotein. Hirofumi Hamada, Keiji Miura, Keiko Ariyoshi, Yuji Heike, Shigeo Sato, Koh-zoh Kameyama, Yoshikazu Kurosawa, and Takashi Tsuruo.
- *3172 Inhibition of Estradiol Uptake and Transforming Growth Factor α Secretion in Human Breast Cancer Cell Line MCF-7 by an Alkyl-lysophospholipid. Hiroshi Kosano, Yosirou Yasutomo, Nobuo Kugai, Naokazu Nagata, Hirofumi Inagaki, Shigeaki Tanaka, and Osamu Takatani.
- *3176 A Case-Control Study of Diet and Benign Proliferative Epithelial Disorders of the Breast. Thomas E. Rohan, Martin G. Cook, John D. Potter, and Anthony J. McMichael.
- 3182 Synergistic Action of Activin A and Hexamethylene Bisacetamide in Differentiation of Murine Erythroleukemia Cells. Takayuki Yamashita, Yuzuru Eto, Hiroshiro Shibai, and Etsuro Ogata.
- *3186 Relationship between Immunoglobulin Allotypes and Susceptibility to Nasopharyngeal Carcinoma in Malaysia. Robert E. Tarone, Paul H. Levine, Manmohan Yadav, and Janardan P. Pandey.
- *3189 Effect of Steroidal and Nonsteroidal Antiestrogens on the Growth of a Tamoxifen-stimulated Human Endometrial Carcinoma (EnCa101) in Athymic Mice. Marco M. Gottardis, Michelle E. Ricchio, Pondichery G. Satyaswaroop, and V. Craig Jordan.
- 3193 Molecular Analysis of Early Growth-associated Events during the Differentiation of F9 Cells into Embryoid Bodies. Mary Maureen Whitman, Yu-Min Shen, Dianne Soprano, and Kenneth J. Soprano.
- *3199 Identification of a Nuclear Matrix-associated Region of the *c-myc* Protooncogene and Its Recognition by a Nuclear Protein in the Human Leukemia HL-60 Cell Line. Robin H. Chou, Judy R. Churchill, Marcella M. Flubacher, Diane E. Mapstone, and JoLynda Jones.
- *3207 *In Vivo* and *In Vitro* Metabolism of 5-Deazaacyclotetrahydrofolate, an Acyclic Tetrahydrofolate Analogue. Mary H. Hanlon, Robert Ferone, Robert J. Mullin, and Barry R. Keith.
- *3212 Wilms' Tumor and Paternal Occupation. Andrew F. Olshan, Norman E. Breslow, Janet R. Daling, John M. Falletta, Seymour Grufferman, Leslie L. Robison, Mary Waskerwitz, and G. Denman Hammond.
- *3218 Biological Characterization of Multidrug-resistant Human Colon Carcinoma Sublines Induced/Selected by Two Methods. Li-Ying Yang and Jose M. Trujillo.
- 3226 Acquisition of Aryl Hydrocarbon Hydroxylase Inducibility by Aromatic Hydrocarbons in Monolayer-cultured Hepatocytes from Nonresponsive Mouse Strains. Nobuo Nemoto, Junko Sakurai, Ayumi Tazawa, and Takatoshi Ishikawa.
- *3231 Use of Immunotoxins in Combination to Inhibit Clonogenic Growth of Human Breast Carcinoma Cells. Y. H. Yu, J. R. Crews, K. Cooper, S. Ramakrishnan, L. L. Houston, D. S. Leslie, S. L. George, Y. Lidor, C. M. Boyer, D. B. Ring, and R. C. Bast, Jr.
- *3239 Antitumor Activity of Ethyl 5-Amino-1,2-dihydro-2-methyl-3-phenylpyrido[3,4-*b*]pyrazin-7-ylcarbamate, 2-Hydroxyethanesulfonate, Hydrate (NSC 370147) against Selected Tumor Systems in Culture and in Mice. William R. Waud, Wilbur R. Leopold, William L. Elliott, Donald J. Dykes, W. Russell Laster, Jr., Carroll G. Temple, Jr., Steadman D. Harrison, Jr., and Daniel P. Griswold, Jr.
- *3245 Effect of Liposomes Containing Sodium Butyrate Conjugated with Anti-CD19 Monoclonal Antibody on *In Vitro* and *In Vivo* Growth of Malignant Lymphoma. Masahiko Watanabe, John M. Pesando, and Sen-itiroh Hakomori.
- *3249 Antitumor Activity of L6-Ricin Immunotoxin against the H2981-T3 Lung Adenocarcinoma Cell Line *In Vitro* and *In Vivo*. Heinz Schmidberger, Laurel King, Larry C. Lasky, and Daniel A. Vallera.
- *3257 Production of Endothelin in Human Cancer Cell Lines. Masatoshi Kusuhashi, Ken Yamaguchi, Koichi Nagasaki, Chiaki Hayashi, Ai Suzaki, Shingo Hori, Shunnosuke Handa, Yoshiro Nakamura, and Kaoru Abe.
- *3262 Role for Cytosolic Folate-binding Proteins in the Compartmentation of Endogenous Tetrahydrofolates and the 5-Formyl Tetrahydrofolate-mediated Enhancement of 5-Fluoro-2'-deoxyuridine Antitumor Activity *In Vitro*. Larry H. Matherly, Catherine A. Czajkowski, Stephen R. Muench, and John T. Psiakis.
- *3270 Increase in the Active Form of 3-Hydroxy-3-methylglutaryl Coenzyme A Reductase in Human Hepatocellular Carcinoma: Possible Mechanism for Alteration of Cholesterol Biosynthesis. Sumio Kawata, Kenji Takaishi, Toshihiko Nagase, Nobuyuki Ito, Yukihiko Matsuda, Shinji Tamura, Yuji Matsuzawa, and Seiichiro Tarui.
- *3274 Lysis of Human Promyelocytic HL-60 Cells by Amphotericin B in Combination with 2-Chloroethyl-1-nitrosoureas: Role of the Carbamoylating Activity of Nitrosoureas. Janina Brajburg, Svetlana Elberg, Kenneth B. Schechtman, and Gerald Medoff.

§ The CONTENTS arranged by Subject Category can be found immediately following these CONTENTS.

- *3279 **Loss of Heterozygosity in Wilms' Tumors, Studied for Six Putative Tumor Suppressor Regions, Is Limited to Chromosome 11.** M. Mannens, P. Devilee, J. Blik, I. Mandjes, J. de Kraker, C. Heyting, R. M. Slater, and A. Westerveld.
- *3284 **Phase I Study and Pharmacodynamics of Piroxantrone (NSC 349174), a New Anthrapyrazole.** Alexander Hantel, Ross C. Donehower, Eric K. Rowinsky, Estil Vance, Barbara V. Clarke, William P. McGuire, David S. Ettinger, Dennis A. Noe, and Louise B. Grochow.
- *3289 **Mutagenic Response of Fanconi's Anemia Cells from a Defined Complementation Group after Treatment with Photoactivated Bifunctional Psoralens.** Dora Papadopoulou, Berardino Porfirio, and Ethel Moustacchi.
- *3295 **Risks Associated with Source of Fiber and Fiber Components in Cancer of the Colon and Rectum.** Jo L. Freudenheim, Saxon Graham, Peter J. Horvath, James R. Marshall, Brenda P. Haughey, and Gregg Wilkinson.
- 3301 **Effects of Cyclosporine A on Ia Antigen Expression in *N*-Nitroso-*N*-methylurea-induced Rat Mammary Tumors.** Dominique J. Bernard, Jean-Claude Maurizis, Jacques Chassagne, Bernard Sauvezie, Yvette Fonck, Philippe Chollet, and Robert Plagne.
- *3306 **Estrogen Regulation of Placental Alkaline Phosphatase Gene Expression in a Human Endometrial Adenocarcinoma Cell Line.** Judith L. Albert, Susan A. Sundstrom, and C. Richard Lyttle.
- *3311 **Antagonistic Effect of Aclarbucin on the Cytotoxicity of Etoposide and 4'-(9-Acridinylamino)methanesulfon-*m*-anisidide in Human Small Cell Lung Cancer Cell Lines and on Topoisomerase II-mediated DNA Cleavage.** Peter Buhl Jensen, Boe Sandahl Sørensen, Erlend J. F. Demant, Maxwell Sehested, Palle Schelde Jensen, Lars Vindeløv, and Heine Høj Hansen.
- *3317 **Association of the 323/A3 Surface Glycoprotein with Tumor Characteristics and Behavior in Human Breast Cancer.** Atul K. Tandon, Gary M. Clark, Gary C. Chamness, and William L. McGuire.
- *3322 **Increased Secretion of Tumor Necrosis Factor α , Interleukin 1, and Interleukin 6 by Human Mononuclear Cells Exposed to β -Galactoside-specific Lectin from Clinically Applied Mistletoe Extract.** Tibor Hajto, Katarina Hostanska, Karl Frei, Christiane Rordorf, and Hans-Joachim Gabius.
- *3327 **Elevation of Leukemic Cell Intracellular Calcium by the Ether Lipid SRI 62-834.** Charles M. Lazenby, Michael G. Thompson, and John A. Hickman.
- *3331 **Soluble Factor in Normal Tissues That Stimulates High-Molecular-Weight Sialoglycoprotein Production by Human Colon Carcinoma Cells.** Tatsuro Irimura, Andrew M. McIsaac, Debora A. Carlson, Masato Yagita, Elizabeth A. Grimm, David G. Menter, David M. Ota, and Karen R. Cleary.
- 3339 **Classification of Antineoplastic Treatments by Their Differential Toxicity toward Putative Oxygenated and Hypoxic Tumor Subpopulations *in Vivo* in the FSaIIc Murine Fibrosarcoma.** Beverly A. Teicher, Sylvia A. Holden, Antoine Al-Achi, and Terence S. Herman.
- *3345 **Joining of the *c-myc* Gene and a Line 1 Family Member on Chromosome 8 in a Human Primary Giant Cell Carcinoma of the Lung.** Masayoshi Iizuka, Masahiko Shiraishi, Michihiro C. Yoshida, Kenshi Hayashi, and Takao Sekiya.
- *3351 **Biological Monitoring Screening of Patients Provided Antineoplastic Drugs Including Adriamycin, Cyclophosphamide, 5-Fluorouracil, Methotrexate, and Vincristine.** Mary A. Newman, Shane Que Hee, Rita Schoeny, and Larry Lowry.
- *3367 **Metabolism of 2-Acetylaminofluorene and Benzo(*a*)pyrene and Activation of Food-derived Heterocyclic Amine Mutagens by Human Cytochromes P-450.** Michael E. McManus, Wendy M. Burgess, Maurice E. Veronese, Anthony Huggett, Linda C. Quattrochi, and Robert H. Tukey.
- *3377 **12-*O*-Tetradecanoylphorbol-13-Acetate-induced Differentiation of a Human Rhabdomyosarcoma Cell Line.** Salvatore Aguanno, Marina Bouchè, Sergio Adamo, and Mario Molinaro.
- 3383 **Adhesion to Laminin and Expression of Laminin in Clonally Related Transformed and Control Sublines from an Alveolar Epithelial Cell Strain.** John G. Steele, Tarja A. Savolainen, B. Ann Dalton, Lance Smith, and Garry J. Smith.
- *3390 **Cytological Differences between Normal and Malignant Human Cell Populations in Culture.** Una Gilvarry, Denise Farrell, Vincent Lynch, Michael Moriarty, Margaret Dooley, Elizabeth Law, and Martin Clynes.
- *3394 **Expression of Transforming Growth Factor β , by Human Endometrial Carcinoma Cell Lines: Inverse Correlation with Effects on Growth Rate and Morphology.** Jeff A. Boyd and David G. Kaufman.
- 3400 **Hepatocarcinogenesis Due to Chronic Liver Cell Injury in Hepatitis B Virus Transgenic Mice.** Harold A. Dunsford, Stewart Sell, and Francis V. Chisari.
- *3408 **Expression of a Hybrid Form of Alkaline Phosphatase Isoenzyme in a Newly Established Cell Line (HuG-1) from a Gastric Cancer Patient.** Hiroyasu Imanishi, Toshikazu Hada, Koji Muratani, Kazuyuki Hirano, and Kazuya Higashino.
- *3413 **Effects of Interferon on Tumor Tissue Content in Liver Metastases of Human Carcinoid Tumors.** Torbjörn Andersson, Erik Wilander, Barbro Eriksson, P. G. Lindgren, and Kjell Öberg.
- 3416 **Cytogenetic Analysis of Murine Embryo-derived Tumors.** R. J. van Berlo, B. de Jong, J. W. Oosterhuis, T. Dijkhuizen, J. Buist, and A. Dam.
- *3422 **Effects of Bryostatins 1 and 2 on Morphological and Functional Differentiation of SH-SY5Y Human Neuroblastoma Cells.** Annika M. Jalava, Jari Heikkilä, Göran Åkerlind, George R. Pettit, and Karl E. Ökerman.
- *3429 **Rearrangement of the Human *ABL* Oncogene in a Glioblastoma.** Nora Heisterkamp, Christine Morris, Lenny Sender, Eva Knoppel, Lisa Uribe, Mei-Ying Cui, and John Groffen.
- 3435 **The Tobacco-specific Nitrosamine 4-(Methylnitrosamino)-1-(3-pyridyl)-1-butanone Is an Active Transplacental Carcinogen in Syrian Golden Hamsters.** Enrique Correa, Pryavadan A. Joshi, André Castonguay, and Hildegard M. Schüller.
- 3439 **Cellular and Molecular Changes in the Early Stages of Chemical Hepatocarcinogenesis in the Rat.** Ritva P. Evarts, Harushige Nakatsukasa, Elizabeth R. Marsden, Chu-Chieh Hsia, Harold A. Dunsford, and Snorri S. Thorgeirsson.
- *3445 **Targeting of Iodine 111-labeled Bivalent Hapten to Human Melanoma Mediated by Bispecific Monoclonal Antibody Conjugates: Imaging of Tumors Hosted in Nude Mice.** Jean-Marc Le Doussal, Anne Gruaz-Guyon, Marie Martin, Emmanuel Gautherot, Michel Delaage, and Jacques Barbet.

Meeting Report

- 3453 **Differentiation Therapy.** Reuben Lotan, Gillian E. Francis, Colette S. Freeman, and Samuel Waxman.

3465 Announcements

AACR Special Conferences in Cancer Research
Future Annual Meetings of the AACR
New NCI Document: "Models of Metastasis"
Recent Death
Calendar of Events

3466 Errata

G. Powis *et al.*, 50: 2203–2211, 1990.
T. Nomura *et al.*, 50: 2135–2138, 1990.

3467 Author Index

NOTE: AACR forms available in the back of this issue--

- **Application for Active and Corresponding Membership**
- **Application for Associate Membership**

Cancer Research

VOLUME 50 • NUMBER 11

CONTENTS Arranged by Subject Category

BASIC SCIENCES

Biochemistry and Biophysics

- *3141 **An Abnormal Profile of DNA Replication Intermediates in Bloom's Syndrome.** Ulf Lönn, Sigrid Lönn, Urban Nylen, Gerard Winblad, and James German.
- *3270 **Increase in the Active Form of 3-Hydroxy-3-methylglutaryl Coenzyme A Reductase in Human Hepatocellular Carcinoma: Possible Mechanism for Alteration of Cholesterol Biosynthesis.** Sumio Kawata, Kenji Takaishi, Toshihiko Nagase, Nobuyuki Ito, Yukihiko Matsuda, Shinji Tamura, Yuji Matsuzawa, and Seiichiro Tarui.
- *3274 **Lysis of Human Promyelocytic HL-60 Cells by Amphotericin B in Combination with 2-Chloroethyl-1-nitrosoureas: Role of the Carbamoylating Activity of Nitrosoureas.** Janina Brajtburg, Svetlana Elberg, Kenneth B. Schechtman, and Gerald Medoff.
- 3383 **Adhesion to Laminin and Expression of Laminin in Clonally Related Transformed and Control Sublines from an Alveolar Epithelial Cell Strain.** John G. Steele, Tarja A. Savolainen, B. Ann Dalton, Lance Smith, and Garry J. Smith.
- *3422 **Effects of Bryostatins 1 and 2 on Morphological and Functional Differentiation of SH-SY5Y Human Neuroblastoma Cells.** Annika M. Jalava, Jari Heikkilä, Göran Åkerlind, George R. Pettit, and Karl E. O. Åkerman.

Carcinogenesis

- 3226 **Acquisition of Aryl Hydrocarbon Hydroxylase Inducibility by Aromatic Hydrocarbons in Monolayer-cultured Hepatocytes from Nonresponsive Mouse Strains.** Nobuo Nemoto, Junko Sakurai, Ayumi Tazawa, and Takatoshi Ishikawa.
- *3367 **Metabolism of 2-Acetylaminofluorene and Benzo(a)pyrene and Activation of Food-derived Heterocyclic Amine Mutagens by Human Cytochromes P-450.** Michael E. McManus, Wendy M. Burgess, Maurice E. Veronese, Anthony Huggett, Linda C. Quattrochi, and Robert H. Tukey.
- 3400 **Hepatocarcinogenesis Due to Chronic Liver Cell Injury in Hepatitis B Virus Transgenic Mice.** Harold A. Dunsford, Stewart Sell, and Francis V. Chisari.
- *3429 **Rearrangement of the Human ABL Oncogene in a Glioblastoma.** Nora Heisterkamp, Christine Morris, Lenny Sender, Eva Knoppel, Lisa Uribe, Mei-Ying Cui, and John Groffen.
- 3435 **The Tobacco-specific Nitrosamine 4-(Methylnitrosamino)-1-(3-pyridyl)-1-butanone Is an Active Transplacental Carcinogen in Syrian Golden Hamsters.** Enrique Correa, Pryavadan A. Joshi, André Castonguay, and Hildegard M. Schüller.
- 3439 **Cellular and Molecular Changes in the Early Stages of Chemical Hepatocarcinogenesis in the Rat.** Ritva P. Evarts, Harushige Nakatsukasa, Elizabeth R. Marsden, Chu-Chieh Hsia, Harold A. Dunsford, and Snorri S. Thorgeirsson.

Endocrinology

- *3172 **Inhibition of Estradiol Uptake and Transforming Growth Factor α Secretion in Human Breast Cancer Cell Line MCF-7 by an Alkyl-lysophospholipid.** Hiroshi Kosano, Yosirou Yasutomo,

Nobuo Kugai, Naokazu Nagata, Hirofumi Inagaki, Shigeaki Tanaka, and Osamu Takatani.

- *3189 **Effect of Steroidal and Nonsteroidal Antiestrogens on the Growth of a Tamoxifen-stimulated Human Endometrial Carcinoma (EnCa101) in Athymic Mice.** Marco M. Gottardis, Michelle E. Ricchio, Pondichery G. Satyaswaroop, and V. Craig Jordan.
- *3257 **Production of Endothelin in Human Cancer Cell Lines.** Masatoshi Kusahara, Ken Yamaguchi, Koichi Nagasaki, Chiaki Hayashi, Ai Suzuki, Shingo Hori, Shunnosuke Handa, Yoshiro Nakamura, and Kaoru Abe.
- *3306 **Estrogen Regulation of Placental Alkaline Phosphatase Gene Expression in a Human Endometrial Adenocarcinoma Cell Line.** Judith L. Albert, Susan A. Sundstrom, and C. Richard Lyttle.
- *3413 **Effects of Interferon on Tumor Tissue Content in Liver Metastases of Human Carcinoid Tumors.** Torbjörn Andersson, Erik Wilander, Barbro Eriksson, P. G. Lindgren, and Kjell Öberg.

Immunology

- *3146 **Coordinated Induction of Autocrine Tumor Necrosis Factor and Interleukin 1 in Normal Human Monocytes and the Implications for Monocyte-mediated Cytotoxicity.** Diana M. Smith, Gregory A. Lackides, and Lois B. Epstein.
- *3154 **Effect of Recombinant Human Interleukin 4 on Human Monocyte Activity.** Melissa M. Hudson, Avi B. Markowitz, Jordan U. Gutterman, Rebecca D. Knowles, John S. Snyder, and Eugenie S. Kleinerman.
- 3159 **Immune Response to Progressor Variants Derived from Transfection of an Ultraviolet Radiation-induced C3H Mouse Regressor Tumor Cell Line with Activated Harvey-*ras* Oncogene.** David S. Kaba, William E. Pierceall, Janet E. Price, and Honnavara N. Ananthaswamy.
- *3231 **Use of Immunotoxins in Combination to Inhibit Clonogenic Growth of Human Breast Carcinoma Cells.** Y. H. Yu, J. R. Crews, K. Cooper, S. Ramakrishnan, L. L. Houston, D. S. Leslie, S. L. George, Y. Lidor, C. M. Boyer, D. B. Ring, and R. C. Bast, Jr.
- *3249 **Antitumor Activity of L6-Ricin Immunotoxin against the H2981-T3 Lung Adenocarcinoma Cell Line *in Vitro* and *in Vivo*.** Heinz Schmidberger, Laurel King, Larry C. Lasky, and Daniel A. Vallera.
- *3445 **Targeting of Indium 111-labeled Bivalent Hapten to Human Melanoma Mediated by Bispecific Monoclonal Antibody Conjugates: Imaging of Tumors Hosted in Nude Mice.** Jean-Marc Le Doussal, Anne Gruaz-Guyon, Marie Martin, Emmanuel Gautherot, Michel Delaage, and Jacques Barbet.

Molecular Biology and Genetics

- 3193 **Molecular Analysis of Early Growth-associated Events during the Differentiation of F9 Cells into Embryoid Bodies.** Mary Maureen Whitman, Yu-Min Shen, Dianne Soprano, and Kenneth J. Soprano.
- *3289 **Mutagenic Response of Fanconi's Anemia Cells from a Defined Complementation Group after Treatment with Photoactivated Bifunctional Psoralens.** Dora Papadopoulou, Bernardino Porfirio, and Ethel Moustacchi.

* Indicates studies using human-derived material.

- *3345 Joining of the *c-myc* Gene and a Line 1 Family Member on Chromosome 8 in a Human Primary Giant Cell Carcinoma of the Lung. Masayoshi Iizuka, Masahiko Shiraishi, Michihiro C. Yoshida, Kenshi Hayashi, and Takao Sekiya.
- *3394 Expression of Transforming Growth Factor β_1 by Human Endometrial Carcinoma Cell Lines: Inverse Correlation with Effects on Growth Rate and Morphology. Jeff A. Boyd and David G. Kaufman.

Preclinical Pharmacology and Experimental Therapeutics

- *3137 Effect of N^1, N^{14} -Bis(ethyl)homospermine on the Growth of U-87 MG and SF-126 Human Brain Tumor Cells. Hirak S. Basu, Malgorzata Pellarin, Burt G. Feuerstein, Dennis F. Deen, Raymond J. Bergeron, and Laurence J. Marton.
- *3167 Mouse-Human Chimeric Antibody against the Multidrug Transporter P-Glycoprotein. Hirofumi Hamada, Keiji Miura, Keiko Ariyoshi, Yuji Heike, Shigeo Sato, Koh-zoh Kameyama, Yoshikazu Kurosawa, and Takashi Tsuruo.
- *3207 *In Vivo* and *In Vitro* Metabolism of 5-Deazaacyclotetrahydrofolate, an Acyclic Tetrahydrofolate Analogue. Mary H. Hanlon, Robert Ferone, Robert J. Mullin, and Barry R. Keith.
- *3218 Biological Characterization of Multidrug-resistant Human Colon Carcinoma Sublines Induced/Selected by Two Methods. Li-Ying Yang and Jose M. Trujillo.
- *3239 Antitumor Activity of Ethyl 5-Amino-1,2-dihydro-2-methyl-3-phenylpyrido[3,4-*b*]pyrazin-7-ylcarbamate, 2-Hydroxyethanesulfonate, Hydrate (NSC 370147) against Selected Tumor Systems in Culture and in Mice. William R. Waud, Wilbur R. Leopold, William L. Elliott, Donald J. Dykes, W. Russell Laster, Jr., Carroll G. Temple, Jr., Steadman D. Harrison, Jr., and Daniel P. Griswold, Jr.
- *3262 Role for Cytosolic Folate-binding Proteins in the Compartmentation of Endogenous Tetrahydrofolates and the 5-Formyl Tetrahydrofolate-mediated Enhancement of 5-Fluoro-2'-deoxyuridine Antitumor Activity *in Vitro*. Larry H. Matherly, Catherine A. Czajkowski, Stephen P. Muench, and John T. Psiakis.
- *3311 Antagonistic Effect of Aclarubicin on the Cytotoxicity of Etoposide and 4'-(9-Acridinylamino)methanesulfon-*m*-anisidide in Human Small Cell Lung Cancer Cell Lines and on Topoisomerase II-mediated DNA Cleavage. Peter Buhl Jensen, Boe Sandahl Sørensen, Erland J. F. Demant, Maxwell Sehested, Palle Schelde Jensen, Lars Vindeløv, and Heine Høi Hansen.
- *3322 Increased Secretion of Tumor Necrosis Factor α , Interleukin 1, and Interleukin 6 by Human Mononuclear Cells Exposed to β -Galactoside-specific Lectin from Clinically Applied Mistletoe Extract. Tibor Hajto, Katarina Hostanska, Karl Frei, Christiane Rordorf, and Hans-Joachim Gabius.
- *3327 Elevation of Leukemic Cell Intracellular Calcium by the Ether Lipid SRI 62-834. Charles M. Lazenby, Michael G. Thompson, and John A. Hickman.
- 3339 Classification of Antineoplastic Treatments by Their Differential Toxicity toward Putative Oxygenated and Hypoxic Tumor Subpopulations *in Vivo* in the FSaIIc Murine Fibrosarcoma. Beverly A. Teicher, Sylvia A. Holden, Antoine Al-Achi, and Terence S. Herman.

Tumor Biology

- 3182 Synergistic Action of Activin A and Hexamethylene Bisacetamide in Differentiation of Murine Erythroleukemia Cells. Takayuki Yamashita, Yuzuru Eto, Hiroshiro Shibai, and Etsuro Ogata.
- *3199 Identification of a Nuclear Matrix-associated Region of the *c-myc* Protooncogene and Its Recognition by a Nuclear Protein in the

Human Leukemia HL-60 Cell Line. Robin H. Chou, Judy R. Churchill, Marcella M. Flubacher, Diane E. Mapstone, and JoLynda Jones.

- *3245 Effect of Liposomes Containing Sodium Butyrate Conjugated with Anti-CD19 Monoclonal Antibody on *in Vitro* and *in Vivo* Growth of Malignant Lymphoma. Masahiko Watanabe, John M. Pesando, and Sen-itiroh Hakomori.
- *3279 Loss of Heterozygosity in Wilms' Tumors, Studied for Six Putative Tumor Suppressor Regions, Is Limited to Chromosome 11. M. Mannens, P. Devilee, J. Blik, I. Mandjes, J. de Kraker, C. Heyting, R. M. Slater, and A. Westerveld.
- 3301 Effects of Cyclosporine A on Ia Antigen Expression in *N*-Nitroso-*N*-methylurea-induced Rat Mammary Tumors. Dominique J. Bernard, Jean-Claude Maurizis, Jacques Chassagne, Bernard Sauvezie, Yvette Fonck, Philippe Chollet, and Robert Plagne.
- *3317 Association of the 323/A3 Surface Glycoprotein with Tumor Characteristics and Behavior in Human Breast Cancer. Atul K. Tandon, Gary M. Clark, Gary C. Chamness, and William L. McGuire.
- *3331 Soluble Factor in Normal Tissues That Stimulates High-Molecular-Weight Sialoglycoprotein Production by Human Colon Carcinoma Cells. Tatsuro Irimura, Andrew M. McIsaac, Debora A. Carlson, Masato Yagita, Elizabeth A. Grimm, David G. Menter, David M. Ota, and Karen R. Cleary.
- *3377 12-*O*-Tetradecanoylphorbol-13-Acetate-induced Differentiation of a Human Rhabdomyosarcoma Cell Line. Salvatore Aguanno, Marina Bouchè, Sergio Adamo, and Mario Molinaro.
- *3390 Cytological Differences between Normal and Malignant Human Cell Populations in Culture. Una Gilvarry, Denise Farrell, Vincent Lynch, Michael Moriarty, Margaret Dooley, Elizabeth Law, and Martin Clynes.
- *3408 Expression of a Hybrid Form of Alkaline Phosphatase Isoenzyme in a Newly Established Cell Line (HuG-1) from a Gastric Cancer Patient. Hiroyasu Imanishi, Toshikazu Hada, Koji Muratani, Kazuyuki Hirano, and Kazuya Higashino.
- 3416 Cytogenetic Analysis of Murine Embryo-derived Tumors. R. J. van Berlo, B. de Jong, J. W. Oosterhuis, T. Dijkhuizen, J. Buist, and A. Dam.

CLINICAL AND EPIDEMIOLOGICAL INVESTIGATIONS

Clinical

- 3284 Phase I Study and Pharmacodynamics of Piroxantrone (NSC 349174), a New Anthrapyrazole. Alexander Hantel, Ross C. Donehower, Eric K. Rowinsky, Estil Vance, Barbara V. Clarke, William P. McGuire, David S. Ettinger, Dennis A. Noe, and Louise B. Grochow.
- 3351 Biological Monitoring Screening of Patients Provided Anti-neoplastic Drugs Including Adriamycin, Cyclophosphamide, 5-Fluorouracil, Methotrexate, and Vincristine. Mary A. Newman, Shane Que Hee, Rita Schoeny, and Larry Lowry.

Epidemiological

- 3176 A Case-Control Study of Diet and Benign Proliferative Epithelial Disorders of the Breast. Thomas E. Rohan, Martin G. Cook, John D. Potter, and Anthony J. McMichael.
- 3186 Relationship between Immunoglobulin Allotypes and Susceptibility to Nasopharyngeal Carcinoma in Malaysia. Robert E. Tarone, Paul H. Levine, Manmohan Yadav, and Janardan P. Pandey.

3212 Wilms' Tumor and Paternal Occupation. Andrew F. Olshan, Norman E. Breslow, Janet R. Daling, John M. Falletta, Seymour Grufferman, Leslie L. Robison, Mary Waskerwitz, and G. Denman Hammond.

3295 Risks Associated with Source of Fiber and Fiber Components in Cancer of the Colon and Rectum. Jo L. Freudenheim, Saxon Graham, Peter J. Horvath, James R. Marshall, Brenda P. Haughey, and Gregg Wilkinson.

Meeting Report

3453 Differentiation Therapy. Reuben Lotan, Gillian E. Francis, Colette S. Freeman, and Samuel Waxman.

3465 Announcements

AACR Special Conferences in Cancer Research
Future Annual Meetings of the AACR
New NCI Document: "Models of Metastasis"
Recent Death
Calendar of Events

3466 Errata

G. Powis *et al.*, 50: 2203-2211, 1990.
T. Nomura *et al.*, 50: 2135-2138, 1990.

3467 Author Index

NOTE: AACR forms available in the back of this issue--

- **Application for Active and Corresponding Membership**
- **Application for Associate Membership**

Cancer Research

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

50 (11)

Cancer Res 1990;50:3137-3466.

Updated version Access the most recent version of this article at:
<http://cancerres.aacrjournals.org/content/50/11.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/50/11.citation>. Click on "Request Permissions" which will take you to the Copyright Clearance Center's (CCC) Rightslink site.