



## CONTENTS†

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

### BASIC SCIENCES

- \*6625 Effect of Phorbol Ester Treatment on Drug-induced, Topoisomerase II-mediated DNA Cleavage in Human Leukemia Cells. Leonard A. Zwelling, Diana Chan, Michael Hinds, Janice Mayes, Lynn E. Silberman, and Mark Blick.
- 6634 Influence of Mouse Major Histocompatibility Complex (H-2) on N-Ethyl-N-nitrosourea-induced Tumor Formation in Various Organs. L. C. J. M. Oomen, M. A. van der Valk, A. A. M. Hart, P. Demant, and P. Emmelot.
- 6642 Effect of Different Levels of Omega-3 and Omega-6 Fatty Acids on Azoxymethane-induced Colon Carcinogenesis in F344 Rats. Bandaru S. Reddy and S. Sugie.
- 6648 Comparative Carcinogenesis by Nitrosomethylalkylamines in Syrian Hamsters. W. Lijinsky and R. M. Kovatch.
- \*6653 MX2, a Morpholino Anthracycline, as a New Antitumor Agent against Drug-sensitive and Multidrug-resistant Human and Murine Tumor Cells. Masahiko Watanabe, Nobuyasu Komeshima, Shohachi Nakajima, and Takashi Tsuruo.
- 6658 Overcoming Suppression of Antitumor Immune Reactivity in Tumor-bearing Rats by Treatment with Bleomycin. Zhen-Yi Xu, Masuo Hosokawa, Kiyoshi Morikawa, Masanori Hatakeyama, and Hiroshi Kobayashi.
- 6664 Effect of L-Histidinol on the Metabolism of 5-Fluorouracil in the BALB/c × DBA/8 F<sub>1</sub> Murine Tumor System. Robert C. Sawyer, Robert L. Stolfi, and Daniel S. Martin.
- \*6669 Effects of Thioether Phospholipid BM 41.440 on Protein Kinase C and Phorbol Ester-induced Differentiation of Human Leukemia HL60 and KG-1 Cells. Mamoru Shoji, Robert L. Raynor, Wolfgang E. Berdel, William R. Vogler, and J. F. Kuo.
- 6674 Changes in CuZn-Superoxide Dismutase during Induced Differentiation of Murine Erythroleukemia Cells. Francesco Paoletti and Alessandra Mocali.
- 6678 Isolation and Characterization of Colon Cancer Mucin from Xenografts of LS174T Cells. James C. Byrd, Jeannette Nardelli, Bader Siddiqui, and Young S. Kim.
- 6686 Doxycycline in Combination Chemotherapy of a Rat Leukemia. Coby Van den Bogert, Bert H. J. Dontje, and Albert M. Kroon.
- \*6691 Insulin-like Growth Factor II mRNA Expression in Human Breast Cancer. Douglas Yee, Kevin J. Cullen, Soonmyoung Paik, James F. Perdue, Brian Hampton, Arnold Schwartz, Marc E. Lippman, and Neal Rosen.
- 6697 Serotonin as a Major Serum Factor Inducing the Phospholipase C-mediated Hydrolysis of Phosphoinositides in Normal Rat Kidney Cells. Yasuo Hamamori, Masahiko Hoshijima, Toshihiko Ohmori, Takashi Ueda, and Yoshimi Takai.
- 6703 Influence of cis-Diamminedichloroplatinum(II) on DNA Synthesis and Cell Cycle Progression in Excision Repair Proficient and Deficient Chinese Hamster Ovary Cells. Christine M. Sorenson and Alan Eastman.
- \*6708 *In Vitro* and *In Vivo* Activation of B-Lymphocytes: A Flow Cytometric Study of Chromatin Structure Employing 7-Aminoactinomycin D. Trond Stokke, Harald Holte, and Harald B. Steen.
- \*6715 Investigation of the Effects of Heat Shock and Agents Which Induce a Heat Shock Response on the Induction of Differentiation of HL-60 Cells. Frances M. Richards, Andrea Watson, and John A. Hickman.
- \*6721 Lack of Correlation between Induction of Chemotactic Peptide Receptors and Stimulus-induced Actin Polymerization in HL-60 Cells Treated with Dibutyl Cyclic Adenosine Monophosphate or Retinoic Acid. K. Murali Krishna Rao, Mark S. Currie, J. Cullen Ruff, and Harvey J. Cohen.
- 6727 Membrane-associated Phosphatidylinositol Kinase of R3230AC Mammary Tumors and Normal Mammary Glands and Effects of Insulin on Tumor Enzyme Activity. Uma Narayanan, Christopher Keuker, and Russell Hilf.
- \*6733 Changes in *c-myc*, *c-fms*, and *N-ras* Proto-oncogene Expression Associated with Retinoic Acid-induced Monocytic Differentiation of Human Leukemia HL60/MRI Cells. Masue Imaizumi and Theodore R. Breitman.
- 6739 Relationship of Hepatic Peroxisome Proliferation and Replicative DNA Synthesis to the Hepatocarcinogenicity of the Peroxisome Proliferators Di(2-ethylhexyl)phthalate and [4-Chloro-6-(2,3-xylylidino)-2-pyrimidinylthio]acetic Acid (Wy-14,643) in Rats. Daniel S. Marsman, Russell C. Cattley, James G. Conway, and James A. Popp.
- 6745 Late Target Protein of the Carcinogen N-2-Fluorenylacetamide in Rat Liver. Khan M. Munir, Gary R. Blackburn, and Sam Sorof.
- \*6753 Enhanced Expression of *c-myc* and Epidermal Growth Factor Receptor (*C-erbB-1*) Genes in Primary Human Renal Cancer. Masahiro Yao, Taro Shuin, Hiroshi Masaki, and Yoshinobu Kubota.
- \*6758 Chemotactic Activity of Endothelial Cell-derived Interleukin 1 for Human Tumor Cells. F. William Orr, Michael R. Buchanan, Victor A. Tron, David Guy, Davide Lauri, and Daniel N. Sauder.
- \*6764 Differential Regulation of Growth and Invasiveness of MCF-7 Breast Cancer Cells by Antiestrogens. Erik W. Thompson, Reuven Reich, Thomas B. Shima, Adriana Albini, Jeannette Graf, George R. Martin, Robert B. Dickson, and Marc E. Lippman.
- \*6769 Monoclonal Antibodies Directed to a Disulfated Glycosphingolipid, S<sub>B1a</sub> (GgOse<sub>4</sub>Cer-IP<sup>IV</sup><sup>3</sup>-bis-sulfate), Associated with Human Hepatocellular Carcinoma. Nozomu Hiraiwa, Naoko Iida, Ineo Ishizuka, Shigeyuki Itai, Katsuyoshi Shigeta, Reiji Kannagi, Yoshihiro Fukuda, and Hiroo Imura.
- \*6775 Patterns of Methionine Auxotrophy in Normal and Neoplastic Cells: The Methionine Independence of Lymphocyte Mitogenesis and Low Frequency of the Methionine-dependent Phenotype in Human Tumors. Jean Gabriel Judde and Philip Frost.

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

- 6780 Cyanoethylation of DNA *in Vivo* by 3-(Methylnitrosamino)-propionitrile, an *Areca*-derived Carcinogen. Bogdan Prokopczyk, Peter Bertinato, and Dietrich Hoffmann.
- \*6785 Interactions of Thrombospondin with Sulfated Glycolipids and Proteoglycans of Human Melanoma Cells. David D. Roberts.
- \*6794 Phototoxicity Mechanism of a Kryptocyanine Dye in Human Red Cell Membranes and Isolated Murine Mitochondria. Oscar Valdes-Aguilera, Gulshan Ara, and Irene E. Kochevar.
- \*6799 Mucin-like Carcinoma-associated Antigen Defined by Three Monoclonal Antibodies against Different Epitopes. Christian Stähli, Mario Caravatti, Margreth Aeschbacher, Christine Kocyba, Béla Takacs, and Heinz Carmann.
- \*6803 Characterization of a Human Small Cell Lung Carcinoma Cell Line with Acquired Resistance to *cis*-Diamminedichloroplatinum(II) *in Vitro*. G. A. P. Hospers, N. H. Mulder, B. de Jong, L. de Ley, D. R. A. Uges, A. M. J. Fichtinger-Schepman, R. J. Scheper, and E. G. E. de Vries.
- 6808 Effects of the Aromatase Inhibitor 7 $\alpha$ -(4'-Amino)phenylthio-4-androstene-3,17-dione on 7,12-Dimethylbenz(a)anthracene-induced Mammary Carcinoma in Rats. Robert W. Brueggemeier and Pui-Kai Li.
- \*6811 Purification and Composition of the Human Tumor-associated Glycoprotein (TAG-72) Defined by Monoclonal Antibodies CC49 and B72.3. Donald G. Sheer, Jeffrey Schlom, and Herbert L. Cooper.
- \*6819 Involvement of the Polyamine Pathway in Antiestrogen-induced Growth Inhibition of Human Breast Cancer. Fredric J. Cohen, Andrea Manni, Patricia Glikman, Mary Bartholomew, and Laurence Demers.
- 6826 Regulation of Tumor-induced Myelopoiesis and the Associated Immune Suppressor Cells in Mice Bearing Metastatic Lewis Lung Carcinoma by Prostaglandin E<sub>2</sub>. M. Rita I. Young, Melvin E. Young, and Kimberly Kim.
- 6832 Macrophage and Lymphocyte Potentiation of Syngeneic Tumor Cell and Host Fibroblast Collagenolytic Activity in Rats. Mustafa K. Dabbous, Susan M. North, Lena Haney, and Garth L. Nicolson.
- 6837 Internucleosomal Cleavage and Chromosomal Degradation by Bleomycin and Phleomycin in Yeast. C. W. Moore.
- \*6844 Differential Expression of Insulin-like Growth Factor II mRNA in Human Primary Liver Cancers, Benign Liver Tumors, and Liver Cirrhosis. Elisabetta Cariani, Chantal Lasserre, Danielle Seurin, Bernard Hamelin, François Kemeny, Dominique Franco, Michael P. Czech, Axel Ullrich, and Christian Brechot.
- 6850 Characterization of Mouse Cell Lines Resistant to Nickel(II) Ions. Xin Wei Wang, Richard J. Imbra, and Max Costa.
- \*6855 Immunohistochemical and Biochemical Study of a Cathepsin B-like Proteinase in Human Colonic Cancers. D. Keppler, M. C. Fondanèche, V. Dalet-Fumeron, M. Pagano, and P. Burtin.
- \*6863 Influence of Organ Environment on the Growth, Selection, and Metastasis of Human Colon Carcinoma Cells in Nude Mice. Kiyoshi Morikawa, Shirley M. Walker, Motowo Nakajima, Sen Pathak, J. Milburn Jessup, and Isaiah J. Fidler.
- 6872 Chemoprevention of *N*-Nitrosomethylbenzylamine - induced Esophageal Cancer in Rats by the Naturally Occurring Thioether, Diallyl Sulfide. Michael J. Wargovich, Cynthia Woods, Vincent W. S. Eng, L. Clifton Stephens, and Kenneth Gray.
- 6876 A Murine Model of Experimental Metastasis to Bone and Bone Marrow. Francisco Arguello, Raymond B. Baggs, and Christopher N. Frantz.
- 6882 Analysis of Hepatocyte Plasma Membrane Polarity during Rat Azo Dye Hepatocarcinogenesis Using Monoclonal Antibodies Directed against Domain-associated Antigens. Jean-Yves Scoazec, Michèle Maurice, Alain Moreau, and Gérard Feldmann.
- \*6891 Characterization of Three Small Cell Lung Cancer Cell Lines Established from One Patient during Longitudinal Follow-up. Hendrikus H. Berendsen, Lou de Leij, Elisabeth G. E. de Vries, Geert Mesander, Nanno H. Mulder, Bouke de Jong, Charles H. C. M. Buys, Pieter E. Postmus, Sibrand Poppema, Henk J. Sluiter, and Hauw T. The.
- 6900 Tissue-specific Pharmacodynamics of 5-Bromo-2'-deoxyuridine Incorporation into DNA in VX2 Tumor-bearing Rabbits. Philip L. Stetson, Jonathan Maybaum, John G. Wagner, Damon R. Averill, Ira S. Wollner, James A. Knol, Norma J. Johnson, Zhaomin Yang, Diane Preiskorn, Patricia Smith, Conrad A. Knutsen, and William D. Ensminger.
- \*6906 A M<sub>2</sub>, 58,000 Glycoprotein Specifically Expressed in Developing Hamster Pancreas and Reexpressed in Hamster and Human Pancreatic Carcinomas. A. Heredia and M. J. Escibano.
- 6912 Induction of Lung and Exocrine Pancreas Tumors in F344 Rats by Tobacco-specific and *Areca*-derived *N*-Nitrosamines. Abraham Rivenson, Dietrich Hoffmann, Bogdan Prokopczyk, Shantou Amin, and Stephen S. Hecht.
- 6918 Effect of Pretreatment with ICRF-187 on the Total Cumulative Dose of Doxorubicin Tolerated by Beagle Dogs. E. H. Herman, V. J. Ferrans, R. S. K. Young, and R. L. Hamlin.
- \*6926 Immunohistological and Functional Analyses of Lymphoid Infiltrates in Human Glioblastomas. Maria Christina Kuppner, Marie France Hamou, and Nicolas de Tribolet.
- 6933 Quantitative *in Vitro* Assay for Tumor Cell Invasion through Extracellular Matrix or into Protein Gels. Lars Johan Erkell and Volker Schirmmacher.
- \*6938 Immunohistochemical Characterization of Two Monoclonal Antibodies, P25.48 and P25.91, Which Define a New Prostate-specific Antigen. Michel Bazinet, Richard J. Cote, Carlos Cordon-Cardo, Andrzej Myc, William R. Fair, and Lloyd J. Old.
- \*6943 Inhibition of MCF-7 Cell Growth by 12-*O*-Tetradecanoylphorbol-13-acetate and 1,2-Dioctanoyl-*sn*-glycerol: Distinct Effects on Protein Kinase C Activity. Marc Issandou, Francis Bayard, and Jean-Marie Darbon.

## CLINICAL AND EPIDEMIOLOGICAL INVESTIGATIONS

- 6951 Smoking and Lung Cancer in Women: Findings in a Prospective Study. Lawrence Garfinkel and Steven D. Stellman.
- 6956 Pharmacokinetics of 5-Fluorouracil Assessed with a Sensitive Mass Spectrometric Method in Patients on a Dose Escalation Schedule. Cees J. van Groeningen, Herbert M. Pinedo, Jozef Heddes, Robert M. Kok, Adrianus P. J. M. de Jong, Evert Wattel, Godefridus J. Peters, and Jan Lankelma.

\* \* \*

### Letter to the Editor

- 6962 Correspondence re: L. F. Pearlman *et al.*, Interaction of Three Second-Generation Anthracyclines with Polynucleotides, RNA, DNA, and Nucleosomes. *Cancer Res.*, 46: 341-346, 1986. Trond Stokke. Reply by H. Simpkins, M. Figliomeni, L. Pearlman, and M. Rosen.

Continued

**6966 Announcements**

Eightieth Annual Meeting of the AACR  
AACR Special Conferences in Cancer Research  
Future Annual Meetings of the AACR  
Collected Perspectives in Cancer Research  
Recent Death  
Calendar of Events

**6968 Erratum**

J. Bergh *et al.*, 48: 4615–4619, 1988.

**6969 Employment Register of the American Association for Cancer Research**

**6976 Author Index**

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

- **1989 Employment Register Forms and Instructions**
- **Application for Associate Membership**
- **Advance Registration Form for the 80th Annual Meeting**

# Cancer Research

VOLUME 48 • NUMBER 23

## CONTENTS Arranged by Subject Category

### BASIC SCIENCES

#### *Biochemistry and Biophysics*

- \*6625 Effect of Phorbol Ester Treatment on Drug-induced, Topoisomerase II-mediated DNA Cleavage in Human Leukemia Cells. Leonard A. Zwelling, Diana Chan, Michael Hinds, Janice Mayes, Lynn E. Silberman, and Mark Blick.
- 6664 Effect of L-Histidinol on the Metabolism of 5-Fluorouracil in the BALB/c × DBA/8 F<sub>1</sub> Murine Tumor System. Robert C. Sawyer, Robert L. Stolfi, and Daniel S. Martin.
- 6678 Isolation and Characterization of Colon Cancer Mucin from Xenografts of LS174T Cells. James C. Byrd, Jeannette Nardelli, Bader Siddiqui, and Young S. Kim.
- 6697 Serotonin as a Major Serum Factor Inducing the Phospholipase C-mediated Hydrolysis of Phosphoinositides in Normal Rat Kidney Cells. Yasuo Hamamori, Masahiko Hoshijima, Toshihiko Ohmori, Takashi Ueda, and Yoshimi Takai.
- \*6775 Patterns of Methionine Auxotrophy in Normal and Neoplastic Cells: The Methionine Independence of Lymphocyte Mitogenesis and Low Frequency of the Methionine-dependent Phenotype in Human Tumors. Jean Gabriel Judde and Philip Frost.
- \*6785 Interactions of Thrombospondin with Sulfated Glycolipids and Proteoglycans of Human Melanoma Cells. David D. Roberts.
- \*6794 Phototoxicity Mechanism of a Kryptocyanine Dye in Human Red Cell Membranes and Isolated Murine Mitochondria. Oscar Valdes-Aguilera, Gulshan Ara, and Irene E. Kochevar.
- \*6943 Inhibition of MCF-7 Cell Growth by 12-O-Tetradecanoylphorbol-13-acetate and 1,2-Dioctanoyl-sn-glycerol: Distinct Effects on Protein Kinase C Activity. Marc Issandou, Francis Bayard, and Jean-Marie Darbon.

#### *Carcinogenesis*

- 6634 Influence of Mouse Major Histocompatibility Complex (H-2) on N-Ethyl-N-nitrosourea-induced Tumor Formation in Various Organs. L. C. J. M. Oomen, M. A. van der Valk, A. A. M. Hart, P. Demant, and P. Emmelot.
- 6642 Effect of Different Levels of Omega-3 and Omega-6 Fatty Acids on Azoxymethane-induced Colon Carcinogenesis in F344 Rats. Bandaru S. Reddy and S. Sugie.
- 6648 Comparative Carcinogenesis by Nitrosomethylalkylamines in Syrian Hamsters. W. Lijinsky and R. M. Kovatch.
- 6739 Relationship of Hepatic Peroxisome Proliferation and Replicative DNA Synthesis to the Hepatocarcinogenicity of the Peroxisome Proliferators Di(2-ethylhexyl)phthalate and [4-Chloro-6-(2,3-xylylidino)-2-pyrimidinylthio]acetic Acid (Wy-14,643) in Rats. Daniel S. Marsman, Russell C. Cattley, James G. Conway, and James A. Popp.
- 6745 Late Target Protein of the Carcinogen N-2-Fluorenylacetylacetamide in Rat Liver. Khan M. Munir, Gary R. Blackburn, and Sam Sorof.
- 6780 Cyanoethylation of DNA *in Vivo* by 3-(Methylnitrosamino)propionitrile, an *Areca*-derived Carcinogen. Bogdan Prokopczyk, Peter Bertinato, and Dietrich Hoffmann.

- \*6844 Differential Expression of Insulin-like Growth Factor II mRNA in Human Primary Liver Cancers, Benign Liver Tumors, and Liver Cirrhosis. Elisabetta Cariani, Chantal Lasserre, Danielle Seurin, Bernard Hamelin, François Kemeny, Dominique Franco, Michael P. Czech, Axel Ullrich, and Christian Brechot.
- 6850 Characterization of Mouse Cell Lines Resistant to Nickel(II) Ions. Xin Wei Wang, Richard J. Imbra, and Max Costa.
- 6872 Chemoprevention of N-Nitrosomethylbenzylamine-induced Esophageal Cancer in Rats by the Naturally Occurring Thioether, Diallyl Sulfide. Michael J. Wargovich, Cynthia Woods, Vincent W. S. Eng, L. Clifton Stephens, and Kenneth Gray.
- 6882 Analysis of Hepatocyte Plasma Membrane Polarity during Rat Azo Dye Hepatocarcinogenesis Using Monoclonal Antibodies Directed against Domain-associated Antigens. Jean-Yves Scoazec, Michèle Maurice, Alain Moreau, and Gérard Feldmann.
- 6912 Induction of Lung and Exocrine Pancreas Tumors in F344 Rats by Tobacco-specific and *Areca*-derived N-Nitrosamines. Abraham Rivenson, Dietrich Hoffmann, Bogdan Prokopczyk, Shantu Amin, and Stephen S. Hecht.

#### *Endocrinology*

- 6727 Membrane-associated Phosphatidylinositol Kinase of R3230AC Mammary Tumors and Normal Mammary Glands and Effects of Insulin on Tumor Enzyme Activity. Uma Narayanan, Christopher Keuker, and Russell Hilf.
- \*6764 Differential Regulation of Growth and Invasiveness of MCF-7 Breast Cancer Cells by Antiestrogens. Erik W. Thompson, Reuven Reich, Thomas B. Shima, Adriana Albini, Jeannette Graf, George R. Martin, Robert B. Dickson, and Marc E. Lippman.
- 6808 Effects of the Aromatase Inhibitor 7 $\alpha$ -(4'-Amino)phenylthio-4-androstene-3,17-dione on 7,12-Dimethylbenz(a)anthracene-induced Mammary Carcinoma in Rats. Robert W. Brueggemeier and Pui-Kai Li.
- \*6819 Involvement of the Polyamine Pathway in Antiestrogen-induced Growth Inhibition of Human Breast Cancer. Fredric J. Cohen, Andrea Manni, Patricia Glikman, Mary Bartholomew, and Laurence Demers.

#### *Immunology*

- 6658 Overcoming Suppression of Antitumor Immune Reactivity in Tumor-bearing Rats by Treatment with Bleomycin. Zhen-Yi Xu, Masuo Hosokawa, Kiyoshi Morikawa, Masanori Hatakeyama, and Hiroshi Kobayashi.
- \*6769 Monoclonal Antibodies Directed to a Disulfated Glycosphingolipid, S<sub>B1a</sub> (GgOse<sub>4</sub>Cer-IP<sup>3</sup>-bis-sulfate), Associated with Human Hepatocellular Carcinoma. Nozomu Hiraiwa, Naoko Iida, Ineo Ishizuka, Shigeyuki Itai, Katsuyoshi Shigeta, Reiji Kannagi, Yoshihiro Fukuda, and Hiroo Imura.
- \*6799 Mucin-like Carcinoma-associated Antigen Defined by Three Monoclonal Antibodies against Different Epitopes. Christian Stähli, Mario Caravatti, Margreth Aeschbacher, Christine Kocyba, Béla Takacs, and Heinz Carmann.

\* Indicates studies using human-derived material.

- \*6811 Purification and Composition of the Human Tumor-associated Glycoprotein (TAG-72) Defined by Monoclonal Antibodies CC49 and B72.3. Donald G. Sheer, Jeffrey Schlom, and Herbert L. Cooper.
- 6826 Regulation of Tumor-induced Myelopoiesis and the Associated Immune Suppressor Cells in Mice Bearing Metastatic Lewis Lung Carcinoma by Prostaglandin E<sub>2</sub>. M. Rita I. Young, Melvin E. Young, and Kimberly Kim.
- 6832 Macrophage and Lymphocyte Potentiation of Syngeneic Tumor Cell and Host Fibroblast Collagenolytic Activity in Rats. Mustafa K. Dabbous, Susan M. North, Lena Haney, and Garth L. Nicolson.
- \*6906 A M, 58,000 Glycoprotein Specifically Expressed in Developing Hamster Pancreas and Reexpressed in Hamster and Human Pancreatic Carcinomas. A. Heredia and M. J. Escribano.
- \*6926 Immunohistological and Functional Analyses of Lymphoid Infiltrates in Human Glioblastomas. Maria Christina Kuppner, Marie France Hamou, and Nicolas de Tribolet.
- \*6938 Immunohistochemical Characterization of Two Monoclonal Antibodies, P25.48 and P25.91, Which Define a New Prostate-specific Antigen. Michel Bazinet, Richard J. Cote, Carlos Cordon-Cardo, Andrzej Myc, William R. Fair, and Lloyd J. Old.

### Molecular Biology and Genetics

- \*6733 Changes in *c-myc*, *c-fms*, and *N-ras* Proto-oncogene Expression Associated with Retinoic Acid-induced Monocytic Differentiation of Human Leukemia HL60/MRI Cells. Masue Imaizumi and Theodore R. Breitman.
- \*6753 Enhanced Expression of *c-myc* and Epidermal Growth Factor Receptor (*C-erbB-1*) Genes in Primary Human Renal Cancer. Masahiro Yao, Taro Shuin, Hiroshi Misaki, and Yoshinobu Kubota.

### Preclinical Pharmacology and Experimental Therapeutics

- \*6653 MX2, a Morpholino Anthracycline, as a New Antitumor Agent against Drug-sensitive and Multidrug-resistant Human and Murine Tumor Cells. Masahiko Watanabe, Nobuyasu Komeshima, Shohachi Nakajima, and Takashi Tsuruo.
- \*6669 Effects of Thioether Phospholipid BM 41.440 on Protein Kinase C and Phorbol Ester-induced Differentiation of Human Leukemia HL60 and KG-1 Cells. Mamoru Shoji, Robert L. Raynor, Wolfgang E. Berdel, William R. Vogler, and J. F. Kuo.
- 6686 Doxycycline in Combination Chemotherapy of a Rat Leukemia. Coby Van den Bogert, Bert H. J. Dontje, and Albert M. Kroon.
- 6703 Influence of *cis*-Diamminedichloroplatinum(II) on DNA Synthesis and Cell Cycle Progression in Excision Repair Proficient and Deficient Chinese Hamster Ovary Cells. Christine M. Sorenson and Alan Eastman.
- \*6721 Lack of Correlation between Induction of Chemotactic Peptide Receptors and Stimulus-induced Actin Polymerization in HL-60 Cells Treated with Dibutylryl Cyclic Adenosine Monophosphate or Retinoic Acid. K. Murali Krishna Rao, Mark S. Currie, J. Cullen Ruff, and Harvey J. Cohen.
- 6900 Tissue-specific Pharmacodynamics of 5-Bromo-2'-deoxyuridine Incorporation into DNA in VX2 Tumor-bearing Rabbits. Philip L. Stetson, Jonathan Maybaum, John G. Wagner, Damon R. Averill, Ira S. Wollner, James A. Knol, Norma J. Johnson, Zhaomin Yang, Diane Preiskorn, Patricia Smith, Conrad A. Knutsen, and William D. Ensminger.

- 6918 Effect of Pretreatment with ICRF-187 on the Total Cumulative Dose of Doxorubicin Tolerated by Beagle Dogs. E. H. Herman, V. J. Ferrans, R. S. K. Young, and R. L. Hamlin.

### Tumor Biology

- 6674 Changes in CuZn-Superoxide Dismutase during Induced Differentiation of Murine Erythroleukemia Cells. Francesco Paoletti and Alessandra Mocali.
- \*6691 Insulin-like Growth Factor II mRNA Expression in Human Breast Cancer. Douglas Yee, Kevin J. Cullen, Soonmyoung Paik, James F. Perdue, Brian Hampton, Arnold Schwartz, Marc E. Lippman, and Neal Rosen.
- \*6708 *In Vitro* and *In Vivo* Activation of B-Lymphocytes: A Flow Cytometric Study of Chromatin Structure Employing 7-Aminoactinomycin D. Trond Stokke, Harald Holte, and Harald B. Steen.
- \*6715 Investigation of the Effects of Heat Shock and Agents Which Induce a Heat Shock Response on the Induction of Differentiation of HL-60 Cells. Frances M. Richards, Andrea Watson, and John A. Hickman.
- \*6758 Chemotactic Activity of Endothelial Cell-derived Interleukin 1 for Human Tumor Cells. F. William Orr, Michael R. Buchanan, Victor A. Tron, David Guy, Davide Lauri, and Daniel N. Sauder.
- \*6803 Characterization of a Human Small Cell Lung Carcinoma Cell Line with Acquired Resistance to *cis*-Diamminedichloroplatinum(II) *in Vitro*. G. A. P. Hospers, N. H. Mulder, B. de Jong, L. de Ley, D. R. A. Uges, A. M. J. Fichtinger-Schepman, R. J. Scheper, and E. G. E. de Vries.
- 6837 Internucleosomal Cleavage and Chromosomal Degradation by Bleomycin and Phleomycin in Yeast. C. W. Moore.
- \*6855 Immunohistochemical and Biochemical Study of a Cathepsin B-like Proteinase in Human Colonic Cancers. D. Keppler, M. C. Fondanèche, V. Dalet-Fumeron, M. Pagano, and P. Burtin.
- \*6863 Influence of Organ Environment on the Growth, Selection, and Metastasis of Human Colon Carcinoma Cells in Nude Mice. Kiyoshi Morikawa, Shirley M. Walker, Motowo Nakajima, Sen Pathak, J. Milburn Jessup, and Isaiah J. Fidler.
- 6876 A Murine Model of Experimental Metastasis to Bone and Bone Marrow. Francisco Arguello, Raymond B. Baggs, and Christopher N. Frantz.
- 6933 Quantitative *in Vitro* Assay for Tumor Cell Invasion through Extracellular Matrix or into Protein Gels. Lars Johan Erkell and Volker Schirmacher.

### Virology

- \*6891 Characterization of Three Small Cell Lung Cancer Cell Lines Established from One Patient during Longitudinal Follow-up. Hendrikus H. Berendsen, Lou de Leij, Elisabeth G. E. de Vries, Geert Mesander, Nanno H. Mulder, Bouke de Jong, Charles H. C. M. Buys, Pieter E. Postmus, Sibrand Poppema, Henk J. Sluiter, and Hauw T. The.

## CLINICAL AND EPIDEMIOLOGICAL INVESTIGATIONS

### Clinical

- 6956 Pharmacokinetics of 5-Fluorouracil Assessed with a Sensitive Mass Spectrometric Method in Patients on a Dose Escalation Schedule. Cees J. van Groenigen, Herbert M. Pinedo, Jozef Heddes, Robert M. Kok, Adrianus P. J. M. de Jong, Evert Wattel, Godfridus J. Peters, and Jan Lankelma.

Continued

*Epidemiological*

**6951 Smoking and Lung Cancer in Women: Findings in a Prospective Study.** Lawrence Garfinkel and Steven D. Stellman.

\* \* \*

**Letter to the Editor**

**6962 Correspondence re: L. F. Pearlman *et al.*, Interaction of Three Second-Generation Anthracyclines with Polynucleotides, RNA, DNA, and Nucleosomes. *Cancer Res.*, 46: 341-346, 1986..** Trond Stokke. Reply by H. Simpkins, M. Figliomeni, L. Pearlman, and M. Rosen.

**6966 Announcements**

Eightieth Annual Meeting of the AACR  
AACR Special Conferences in Cancer Research  
Future Annual Meetings of the AACR  
Collected Perspectives in Cancer Research  
Recent Death  
Calendar of Events

**6968 Erratum**

J. Bergh *et al.*, 48: 4615-4619, 1988.

**6969 Employment Register of the American Association for Cancer Research**

**6976 Author Index**

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

- **1989 Employment Register Forms and Instructions**
- **Application for Associate Membership**
- **Advance Registration Form for the 80th Annual Meeting**

# Cancer Research

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

## 48 (23)

*Cancer Res* 1988;48:6625-6968.

**Updated version** Access the most recent version of this article at:  
<http://cancerres.aacrjournals.org/content/48/23.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, use this link <http://cancerres.aacrjournals.org/content/48/23.citation>. Click on "Request Permissions" which will take you to the Copyright Clearance Center's (CCC) Rightslink site.