



## CONTENTS

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

### BASIC SCIENCES

- 5049** Redifferentiation as a Basis for Remodeling of Carcinogen-induced Hepatocyte Nodules to Normal Appearing Liver. Masae Tatematsu, Yoshiaki Nagamine, and Emmanuel Farber.
- 5059** Comparative Study of the Sugar Chains of  $\gamma$ -Glutamyltranspeptidases Purified from Rat Liver and Rat AH-66 Hepatoma Cells. Katsuko Yamashita, Akira Hitoi, Naoyuki Taniguchi, Noriko Yokosawa, Yutaka Tsukada, and Akira Kobata.
- \*5064** New Method for Detecting Epstein-Barr Virus Association in Nonproducer Lymphoblastoid Cell Lines. Sergio Giunta and Giuseppe Groppa.
- 5068** Transport of Pyruvate in Mitochondria from Different Tumor Cells. G. Paradies, F. Capuano, G. Palombini, T. Galeotti, and S. Papa.
- 5072** Dose-Response Study of *N*-Nitrosoproline Formation in Rats and a Deduced Kinetic Model for Predicting Carcinogenic Effects Caused by Endogenous Nitrosation. Hiroshi Ohshima, Garry A. T. Mahon, Jürgen Wahrendorf, and Helmut Bartsch.
- 5077** Measurement of 7-Methylguanine as an Estimate of the Amount of Dimethylnitrosamine Formed following Administration of Aminopyrine and Nitrite to Rats. Charles T. Gombar, Julia Zubroff, Gary D. Strahan, and Peter N. Magee.
- 5081** Metastatic Behavior of an Adriamycin-resistant Murine Tumor. R. Giavazzi, L. Miller, and I. R. Hart.
- 5087** Induction of Transformation by Six Classes of Chemical Carcinogens in Adult Rat Liver Epithelial Cells. Tomiko Shimada, Kazunori Furukawa, Dawn M. Kreiser, Andrea Cawein, and Gary M. Williams.
- \*5093** Potentiation of 1- $\beta$ -D-Arabinofuranosylcytosine Metabolism and Cytotoxicity by 2,3-Dihydro-1*H*-imidazo[1,2-*b*]pyrazole in the Human Promyelocytic Leukemic Cell, HL-60. S. Grant, K. Bhalla, F. Rauscher III, and E. Cadman.
- 5101** Critical Modulation by Thymidine and Hypoxanthine of Sequential Methotrexate-5-Fluorouracil Synergism in Murine L1210 Cells. A. A. Piper, S. E. Nott, W. B. Mackinnon, and M. H. N. Tattersall.
- 5106** Extraction of Immunogenic and Suppressogenic Antigens from Variants of B16 Melanoma Exhibiting Low or High Metastatic Potentials. Stephen J. LeGrue and Donald R. Hearn.
- \*5112** Flow Cytometric Analysis of Adenosine Analogue Lymphocytotoxicity. Richard F. Kefford, Ian W. Taylor, and Richard M. Fox.
- 5120** Influence of Surgical Removal and Effect of Levamisole on Cytotoxic T-Cell-mediated Antitumor Immunity in Mice. Katsushige Gomi, Makoto Morimoto, and Kikuo Nomoto.
- 5126** Quantitative Flow Cytometric Determination of Anthracycline Content of Rat Bone Marrow Cells. Kees Nooter, Ger van den Engh, and Pieter Sonneveld.
- 5131** Immunochemical Detection and Quantitation of Mitochondrial Cytochrome P-450 and Reduced Nicotinamide Adenine Dinucleotide Phosphate: Cytochrome P-450 Reductase in the Rat Ventral Prostate. Tapio Haaparanta, James Halpert, Hans Glaumann, and Jan-Åke Gustafsson.
- 5138** Different Patterns of Lectin Binding and Cell Surface Sialylation Detected on Related High- and Low-Metastatic Tumor Lines. Peter Altevogt, Mina Fogel, Rachanee Cheinsong-Popov, Jim Dennis, Peter Robinson, and Volker Schirmacher.
- \*5145** Enhancement of the Incorporation of 5-Fluorodeoxyuridylate into DNA of HL-60 Cells by Metabolic Modulations. Masao Tanaka, Kiyoji Kimura, and Shonen Yoshida.
- 5151** *In Vivo* Antitumor Activity of the Bitter Melon (*Momordica charantia*). Catherine Jilka, Beth Striffler, G. William Fortner, Esther F. Hays, and Dolores J. Takemoto.
- 5156** Antiteratogenic Effects of Tumor Inhibitors, Caffeine, Antipain, and Retinoic Acid in Mice. Taisei Nomura, Takayuki Enomoto, Keiko Shibata, Tohru Kanzaki, Hiroyuki Tanaka, Shinsuke Hata, Sakae Kimura, Takeshi Kusafuka, Kazushi Sobue, Shinpei Miyamoto, Hiroshi Nakano, and Hiroko Gotoh.
- 5163** Strong Evidence from Studies with Brachymorphic Mice and Pentachlorophenol That 1'-Sulfooxysafrole Is the Major Ultimate Electrophilic and Carcinogenic Metabolite of 1'-Hydroxysafrole in Mouse Liver. Eric W. Boberg, Elizabeth C. Miller, James A. Miller, Alan Poland, and Amy Liem.
- 5174** Induction of Ornithine Decarboxylase Activity and DNA Synthesis in Hairless Mouse Epidermis by Retinoids. Michael J. Connor and Nicholas J. Lowe.

- \*5178 **Inhibition of Phorbol Ester-mediated Interleukin-2 Production by Cellular Differentiating Agents.** Amiram Ravid, Miriam Patya, Albert L. Rubin, Kurt H. Stenzel, and Abraham Novogrodsky.
- \*5184 **Nerve Growth Factor Receptors of Human Tumors of Neural Crest Origin: Characterization of Binding Site Heterogeneity and Alteration by Theophylline.** Richard J. Riopelle, Tina Haliotis, and John C. Roder.
- 5190 **Cerebrospinal Fluid and Plasma Pharmacokinetics of High Doses of 1- $\beta$ -D-Arabinofuranosylcytosine in Nonhuman Primates.** Jose A. Lopez, G. Peter Beardsley, John G. Krikorian, Ronald W. Mortara, and Ram P. Agarwal.
- 5194 **Bovine Bladder Urothelial Cell Activation of Carcinogens to Metabolites Mutagenic to Chinese Hamster V79 Cells and *Salmonella typhimurium*.** Linda A. Oglesby, Cathy Hix, Linda Snow, Pat MacNair, Marianne Seig, and Robert Langenbach.
- 5200 **Relative Carcinogenic Activity of Various Synthetic and Natural Estrogens in the Syrian Hamster Kidney.** Jonathan J. Li, Sara Antonia Li, John K. Klicka, Jonathan A. Parsons, and Luke K. T. Lam.
- 5205 **Effects of Propylthiouracil on Urinary Metabolites of Cyclophosphamide in Rats.** Kazuo Chijiwa, Willem G. Linscheer, Krishan L. Raheja, and Chaidong Cho.
- 5210 **Effect of Methotrexate with 5-Methyltetrahydrofolate Rescue and Dietary Homocystine on Survival of Leukemic Mice and on Concentrations of Liver Adenosylamino Acids.** Mary A. Hilton, Jerald L. Hoffman, and Margaret K. Sparks.
- 5217 **Effect of Tumor Promoter 12-O-Tetradecanoylphorbol-13-acetate on Recovery of Methotrexate-, N-(Phosphonacetyl)-L-aspartate-, and Cadmium-resistant Colony-forming Mouse and Hamster Cells.** Ferenc Bojan, Anne R. Kinsella, and Margaret Fox.
- 5222 **Molecular and Biological Characterization of Anticarcinogenic and Tumor Cell Growth-inhibitory Activities of Syrian Hamster Lymphotoxin.** Janet H. Ransom and Charles H. Evans.
- 5228 **Parenteral Level of Glucose Intake on Glucose Homeostasis, Tumor Growth, Gluconeogenesis, and Body Composition in Normal and Tumor-bearing Rats.** Ivan L. Cameron and Virginia A. Ord.
- 5235 **Use of Chromatofocusing to Distinguish Estradiol Receptor from Ovarian-dependent and -independent Rat Mammary Tumors.** Alena H. Coufalik, Mark Feldman, Micsunica Platica, Lewis Toth, David Dreiling, and Vincent P. Hollander.
- 5240 **Role of Suppressor Cells in the Decline of Natural Killer Cell Activity in Estrogen-treated Mice.** Vita K. Milisauskas, Gustavo Cudkowicz, and Ichiro Nakamura.
- 5244 **Interrelation between Tumor Cell Proliferation and 17-Fluoresceinated Estrone Binding following Primary Tumor Removal, Radiation, Cyclophosphamide, or Tamoxifen.** Bernard Fisher, Nurten Gunduz, and Elizabeth A. Saffer.
- 5248 **Tumorigenicity *In Vivo* and Induction of Mutagenesis and DNA Repair *In Vitro* by Aclacinomycin A and Marcellomycin: Structure-Activity Relationship and Predictive Value of Short-Term Tests.** Johannes Westendorf, Hildegard Marquardt, M. B. Ketkar, Ulrich Mohr, and Hans Marquardt.
- 5252 **Modification of Chemotherapeutic Effects on L1210 Cells Using Hematoporphyrin and Light.** Stephen P. Creekmore and Daniel S. Zaharko.
- 5258 **Denitrosation as a Determinant of Nitrosocimetidine *In Vivo* Activity.** David E. Jensen.
- \*5268 **Structure-Activity Relationships of a New Series of Retinoidal Benzoic Acid Derivatives as Measured by Induction of Differentiation of Murine F9 Teratocarcinoma Cells and Human HL-60 Promyelocytic Leukemia Cells.** Sidney Strickland, Theodore R. Breitman, Fritz Frickel, Axel Nürrenbach, Erich Hädicke, and Michael B. Sporn.
- \*5273 **Covalent Labeling of Rat Thymocyte and Human Lymphoid Glucocorticoid Receptor.** Carol M. Foster, Howard J. Eisen, and Clara D. Bloomfield.
- 5278 **Pharmacology and Neurotoxicity of *cis*-Diamminedichloroplatinum, Bleomycin, 5-Fluorouracil, and Cyclophosphamide Administration following Osmotic Blood-Brain Barrier Modification.** Edward A. Neuwelt, Peggy A. Barnett, Mark Glasberg, and Eugene P. Frenkel.
- \*5286 **Patterns of Cross-Resistance to the Antifolate Drugs Trimetrexate, Metoprine, Homofolate, and CB3717 in Human Lymphoma and Osteosarcoma Cells Resistant to Methotrexate.** Heyke Diddens, Dietrich Niethammer, and Robert C. Jackson.
- 5293 **Comparative Genotoxicity of Adriamycin and Menogarol, Two Anthracycline Antitumor Agents.** B. K. Bhuyan, D. M. Zimmer, J. H. Mazurek, R. J. Trzos, P. R. Harbach, V. S. Shu, and M. A. Johnson.
- \*5298 **Tamoxifen and 5-Fluorouracil in Breast Cancer: Cytotoxic Synergism *In Vitro*.** Chris Benz, Ed Cadman, John Gwin, Terrence Wu, Jane Amara, Arnold Eisenfeld, and Priscilla Dannies.
- \*5304 **Tamoxifen and 5-Fluorouracil in Breast Cancer: Modulation of Cellular RNA.** Chris Benz, George Santos, and Ed Cadman.
- 5309 **Combined Cytotoxic Effect of Low-Dose 5-Fluorouracil and Hydroxyurea on 9L Cells *In Vitro*.** Shu Kobayashi and Takao Hoshino.
- 5314 **Metastatic Heterogeneity of Cells from Lewis Lung Carcinoma.** Anne-Louise van Lamsweerde, Nicole Henry, and Gilbert Vaes.
- 5321 **Collagen Degradation by Metastatic Variants of Lewis Lung Carcinoma: Cooperation between Tumor Cells and Macrophages.** Nicole Henry, Anne-Louise van Lamsweerde, and Gilbert Vaes.
- 5328 **Antitumor Effect of Actinomycin D Entrapped in Liposomes Bearing Subunits of Tumor-specific Monoclonal Immunoglobulin M Antibody.** Yoshiyuki Hashimoto, Minoru Sugawara, Takashi Masuko, and Hiroshi Hojo.

- 5335 **Synergistic Effect of Vitamin E and Selenium in the Chemoprevention of Mammary Carcinogenesis in Rats.** Paula M. Horvath and Clement Ip.
- 5342 **Effects of Alterations in Early Hormonal Environment on Development and Hormone Dependency of Carcinogen-induced Mammary Tumors in Rats.** P. W. Sylvester, C. F. Aylsworth, D. A. Van Vugt, and J. Meites.
- \*5347 **Stability, Characterization, and Kinetics of <sup>111</sup>In-labeled Monoclonal Antitumor Antibodies in Normal Animals and Nude Mouse-Human Tumor Models.** Samuel E. Halpern, Phillip L. Hagan, Paul R. Garver, James A. Koziol, Agnes W. N. Chen, James M. Frincke, Richard M. Bartholomew, Gary S. David, and Thomas H. Adams.
- \*5356 **Participation of Pterins in the Control of Lymphocyte Stimulation and Lymphoblast Proliferation.** Irmgard Ziegler, Ulrike Hamm, and J. Berndt.
- 5360 **Correlation of Growth Morphology and Clonability with Malignancy of WEHI-7 T-Cell Lymphoma Sublines.** Susanne B. Gjedde.
- 5365 **Dormancy versus Extinction of Mouse Leydig Cell Tumors following Endocrine-induced Regression.** Robert A. Huseby.
- \*5379 **Characterization of a Human Ovarian Carcinoma Cell Line (NIH:OVCAR-3) with Androgen and Estrogen Receptors.** Thomas C. Hamilton, Robert C. Young, Wilma M. McKoy, Karen R. Grotzinger, John A. Green, Elizabeth W. Chu, Jacqueline Whang-Peng, Alfred M. Rogan, William R. Green, and Robert F. Ozols.
- 5390 **Occurrence of the Tumor-specific, Calcium-binding Protein, Oncomodulin, in Vially Transformed Normal Rat Kidney Cells.** J. P. Durkin, L. M. Brewer, and J. P. MacManus.
- \*5395 **Correlation of Malignancy with the Intracellular Na<sup>+</sup>:K<sup>+</sup> Ratio in Human Thyroid Tumors.** Imre Zs.-Nagy, György Lustyik, Géza Lukács, Valéria Zs.-Nagy, and György Balázs.
- 5403 **Morphological Studies on V2 Carcinoma Invasion and Tumor-associated Connective Tissue Changes in the Rabbit Mesentery.** Peter Sträuli, Annemarie In-Albon, and Gisela Haemmerli.
- \*5411 **Gastrin-releasing Peptide-related Peptides in a Human Malignant Lung Carcinoid Tumor.** Kevin A. Roth, Christopher J. Evans, Eckard Weber, Jack D. Barchas, David G. Bostwick, and Klaus G. Bensch.
- 5416 **Correlation of Alkaline Phosphatase Activity to Normal T-Cell Differentiation and to Radiation Leukemia Virus-induced Preleukemic Cells in the C57BL Mouse Thymus.** Gérard Goffinet, Marie-Paule Houben-Defresne, and Jacques Boniver.
- 5427 **Prevention of Chronic Doxorubicin Cardiotoxicity in Beagles by Liposomal Encapsulation.** E. H. Herman, A. Rahman, V. J. Ferrans, J. A. Vick, and P. S. Schein.
- 5433 **Effects of Tumor Promoters on the Frequency of Metallothionein I Gene Amplification in Cells Exposed to Cadmium.** Kenshi Hayashi, Hirota Fujiki, and Takashi Sugimura.
- 5437 **Characterization of Metastatic Clones Derived from a Metastatic Variant of Mouse Colon Adenocarcinoma 26.** Takashi Tsuruo, Takao Yamori, Kuniko Naganuma, Shigeru Tsukagoshi, and Yoshio Sakurai.
- 5443 **Effect of Retinoic Acid on the Growth and Morphology of a Prostatic Adenocarcinoma Cell Line Cloned for the Retinoid Inducibility of Alkaline Phosphatase.** David H. Reese, Bent Gordon, Howard G. Gratzner, Alice J. Clafin, Theodore I. Malinin, Norman L. Block, and Victor A. Politano.
- 5451 **New Method to Quantitate Clonogenic Tumor Cells in the Blood Circulation of Mice.** Norio Suzuki.
- \*5456 **Establishment of Different Clonal Strains from a Human Sarcoma of the Stomach: Tumorigenic Heterogeneity in Athymic Nude Mice.** Tetsuro Okabe, Atsuko Suzuki, Masahira Hirono, Norikazu Tamaoki, Mitsuo Oshimura, and Fumimaro Takaku.
- \*5462 **Effect of Human Fibroblast Interferon on the Antiviral Activity of Mammalian Cells Treated with Bleomycin, Vincristine, or Mitomycin C.** Robert J. Suhadolnik, Yosuke Sawada, Maryann B. Flick, Nancy L. Reichenbach, and Joseph D. Mosca.
- 5467 **Modulation of Plasminogen Activator in Rodent Mammary Tumors by Hormones and Other Effectors.** Rafael Mira-y-Lopez, E. Reich, and Liliana Ossowski.
- 5478 **Establishment and Characterization of a Transplantable Rat Myelomonocytic Leukemia.** Tetsuya Moriuchi, Tsuneyuki Oikawa, Takao Kodama, Hideo Yamaguchi, and Hiroshi Kobayashi.
- \*5484 **Enhancement of Actinomycin D- and *cis*-Diammine-dichloroplatinum(II)-induced Killing of Human Fibroblasts by Human  $\beta$ -Interferon.** Masafumi Inoue and Y. H. Tan.
- \*5489 **Identification of the Gastrointestinal and Pancreatic Cancer-associated Antigen Detected by Monoclonal Antibody 19-9 in the Sera of Patients as a Mucin.** John L. Magnani, Zenon Steplewski, Hilary Koprowski, and Victor Ginsburg.
- 5493 **New Histochemical Method for Measuring Intratumoral Macrophages and Macrophage Recruitment into Experimental Metastases.** Peter J. Bugelski, Richard L. Kirsh, and George Poste.
- \*5502 **Phenotypic Characteristics of Cells Derived from Precursors of Human Melanoma.** Meenhard Herlyn, Dorothee Herlyn, David E. Elder, Edward Bondi, Donato LaRossa, Ralph Hamilton, Henry F. Sears, Gloria Balaban, DuPont Guerry IV, Wallace H. Clark, and Hilary Koprowski.
- \*5509 **Immunohistochemical Localization of Prostate Carcinoma-associated Antigens.** George L. Wright, Jr., Mary Lou Beckett, James J. Starling, Paul F. Schellhammer, Susan M. Sieg, Leopoldo E. Ladaga, and Solobodan Poleskic.

- \* 5517 **Plasminogen Activator Secretion of Human Tumors in Short-Term Organ Culture, Including a Comparison of Primary and Metastatic Colon Tumors.** Gabor Markus, Sarah M. Camiolo, Shin Kohga, Judith M. Madeja, and Arnold Mittelman.
- \* 5526 **Human Embryonal Cell Carcinoma in Nude Mice.** Manfred Wirth, Barbara Inglin, Werner Romen, and Rolf Ackermann.
- 5533 **Plasma Membrane Lipid Structural Order in Doxorubicin-sensitive and -resistant P388 Cells.** A. Ramu, D. Glaubiger, I. T. Magrath, and A. Joshi.
- \* 5538 **Cytotoxicity of Thioether-Lysophospholipids in Leukemias and Tumors of Human Origin.** Wolfgang E. Berdel, Michael Fromm, Ulrich Fink, Wulf Pahlke, Uwe Bicker, Anneliese Reichert, and Johann Rastetter.
- 5544 **Tumor Promoter Actions on Rat Embryonic Development in Culture.** Brian E. Huber and Nigel A. Brown.
- 5552 **12-O-Tetradecanoylphorbol-13-acetate Actions on Macromolecular Synthesis, Ornithine Decarboxylase, and Cellular Differentiation of the Rat Embryonic Visceral Yolk Sac in Culture.** Brian E. Huber and Nigel A. Brown.
- \* 5560 **Expression of Erythroid Acetylcholinesterase in the K-562 Leukemia Cell Line.** Franco Ajmar, Cecilia Garrè, Mario Sessarego, Roberto Ravazzolo, Renata Barresi, Giovanna Bianchi Scarrà, and Mario Lituania.
- \* 5564 **Effects of a Tumor Promoter on Phospholipid Metabolism in HeLa Cells.** Graeme R. Guy and Andrew W. Murray.

#### CLINICAL INVESTIGATIONS

- 5570 **Endogenous Formation of *N*-Nitrosoproline in Cigarette Smokers.** Dietrich Hoffmann and Klaus D. Brunnemann.
- 5575 **Randomized Controlled Study of Adjuvant Immunotherapy with *Nocardia rubra* Cell Wall Skeleton for Inoperable Lung Cancer.** Yuichi Yamamura, Takeshi Ogura, Mitsunori Sakatani, Fumio Hirao, Susumu Kishimoto, Masahiro Fukuoka, Minoru Takada, Masaaki Kawahara, Kiyoyuki Furuse, Osamu Kuwahara, Harumichi Ikegami, and Nobuya Ogawa.
- 5580 **Decreased Natural Killer Cell Activity in Children with Untreated Acute Leukemia.** Anthony G. Nasrallah and Thomas D. Miale.
- 5586 **Increased Whole-Body Protein Turnover in Sick Children with Newly Diagnosed Leukemia or Lymphoma.** C. Lawrence Kien and Bruce M. Camitta.
- 5593 **Tumor Localization in Patients by Radiolabeled Monoclonal Antibodies against Colon Carcinoma.** Jean-Pierre Mach, Jean-Francois Chatal, Jean-Denis Lumbroso, Franz Buchegger, Michel Forni, Jurg Ritschard, Christian Berche, Jean-Yves Douillard, Stephan Carrel, Meenhard Hertyn, Zenon Steplewski, and Hilary Koprowski.

- 5601 **Influence of Intensive Asparaginase in the Treatment of Childhood Non-T-Cell Acute Lymphoblastic Leukemia.** Stephen E. Sallan, Suzanne Hitchcock-Bryan, Richard Gelber, J. Robert Cassady, Emil Frei III, and David G. Nathan.
- 5608 **Ribonucleotide Content of Mononuclear Cells from Normal Subjects and Patients with Chronic Lymphocytic Leukemia: Increased Nicotinamide Adenine Dinucleotide Concentration in Chronic Lymphocytic Leukemia Lymphocytes.** Leonard F. Liebes, Robert L. Krigel, Maryrose Conklyn, Denise R. Nevrla, and Robert Silber.
- 5618 **Lysosomal Arylsulfatases of Human Leukocytes: Increment of Phosphorylated B Variants in Chronic Myelogenous Leukemia.** Yoshio Uehara, Shinsei Gasa, Akira Makita, Keisuke Sakurada, and Tamotsu Miyazaki.

\* \* \*

#### Letters to the Editor

- 5623 **Correspondence re: M. H. Antecol and B. B. Mukherjee. Effects of 12-O-Tetradecanoylphorbol-13-acetate on Fibroblasts from Individuals Genetically Predisposed to Cancer.** *Cancer Res.*, 42: 3870-3879, 1982. Levy Kopelovich. Michael H. Antecol and Barid B. Mukherjee.
- 5627 **Correspondence re: D. A. Beck, R. D. Rossen, D. B. DuBois, and C. O. Felice. Synthesis of Antigens, Cross-Reactive with Bovine Serum Albumin, by Cultured Neuroblastoma Cells.** *Cancer Res.*, 43: 858-863, 1983; D. A. Beck, R. D. Rossen, A. Cangir, and D. B. DuBois. **Correlation of Immune Complexes in Disseminated Neuroblastoma with Serum Antibody to Bovine Serum Albumin.** *Cancer Res.*, 43: 879-885, 1983. Theodore Peters, Jr. and Allan S. Cunningham. Daniel A. Beck, Dwight B. DuBois, and Roger D. Rossen.

#### Meeting Reports

- 5629 **Multiple Primary Neoplasms.** Curtis C. Harris and Keiichi Suemasu.
- 5631 **A National Institutes of Health Workshop Report: Free Radicals in Promotion—A Chemical Pathology Study Section Workshop.** Edmund S. Copeland (ed.).

#### 5638 Special Announcement

#### 5639 Announcements

#### 5641 Books Received

#### 5643 Author Index

#### 5645 Statement of Ownership, Management and Circulation



# Cancer Research

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

## 43 (11)

*Cancer Res* 1983;43:5049-5642.

**Updated version** Access the most recent version of this article at:  
<http://cancerres.aacrjournals.org/content/43/11.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](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/43/11.citation>. Click on "Request Permissions" which will take you to the Copyright Clearance Center's (CCC) Rightslink site.