



CONTENTS

Advances in Brief

- 1325 Regulation of E2F4 Mitogenic Activity during Terminal Differentiation by Its Heterodimerization Partners for Nuclear Translocation.** Pier Lorenzo Puri, Letizia Cimino, Marcella Fulco, Christian Zimmerman, Nicholas B. La Thangue, Antonio Giordano, Adolf Graessmann, and Massimo Levrero.
- 1332 Amplification of the ATP-Binding Cassette 2 Transporter Gene Is Functionally Linked with Enhanced Efflux of Estramustine in Ovarian Carcinoma Cells.** Naomi M. Laing, Martin G. Belinsky, Gary D. Kruh, Daphne W. Bell, Jonathan T. Boyd, Linda Barone, Joseph R. Testa, and Kenneth D. Tew.
- 1338 Thymic Lymphomas in Mice with a Truncating Mutation in *Brcal*.** Lori S. Friedman, Fiona C. Thistlethwaite, Ketan J. Patel, Veronica P. C. C. Yu, Hyunsook Lee, Ashok R. Venkitaraman, Kenneth J. Abel, Mark B. L. Carlton, Susan M. Hunter, William H. Colledge, Martin J. Evans, and Bruce A. J. Ponder.
- 1344 Mutations in the β -Catenin Gene (*CTNBI*) in Endometrioid Ovarian Carcinomas.** José Palacios and Carlos Gamallo.
- 1348 Expression of Lumican in Human Breast Carcinoma.** Etienne Leygue, Linda Snell, Helmut Dotzlaw, Kate Hole, Tamara Hiller-Hitchcock, Peter J. Roughley, Peter H. Watson, and Leigh C. Murphy.
- 1353 Amplification, Expression, and Steroid Regulation of the Preprogalanin Gene in Human Breast Cancer.** Christopher J. Ormandy, Christine S. L. Lee, Helen F. Ormandy, Vera Fantl, John Shine, Gordon Peters, and Robert L. Sutherland.
- 1358 Adenoviral-mediated Transfer of a Heat-inducible Double Suicide Gene into Prostate Carcinoma Cells.** Robert V. Blackburn, Sandra S. Galoforo, Peter M. Corry, and Yong J. Lee.
- 1363 Human Melanoma-specific, Noncytolytic CD8+ T Cells That Can Synthesize Type I Cytokine.** Nitya G. Chakraborty and Bijay Mukherji.
- 1367 *BRCA2* Germ-Line Mutations Are Frequent in Male Breast Cancer Patients without a Family History of the Disease.** Karin Haraldsson, Niklas Loman, Qiu-Xia Zhang, Oskar Johannsson, Håkan Olsson, and Åke Borg.
- 1372 A Large Deletion Disrupts the Exon 3 Transcription Activation Domain of the *BRCA2* Gene in a Breast/Ovarian Cancer Family.** Margareta Nordling, Per Karlsson, Jan Wahlström, Yvonne Engwall, Arne Wallgren, and Tommy Martinsson.
- 1376 The Role of Ataxia-Telangiectasia Heterozygotes in Familial Breast Cancer.** Jindong Chen, Gabriella Giesler Birkholtz, Per Lindblom, Carlos Rubio, and Annika Lindblom.
- 1380 Search for Mutations and Examination of Allelic Expression Imbalance of the *p73* Gene at 1p36.33 in Human Lung Cancers.** Shuji Nomoto, Nobuhiro Haruki, Masashi Kondo, Hiroyuki Konishi, Takao Takahashi, Toshitada Takahashi, and Takashi Takahashi.
- 1384 Low Frequency of Somatic Mutations in the *LKB1*/Peutz-Jeghers Syndrome Gene in Sporadic Breast Cancer.** Graham R. Bignell, Rita Barfoot, Sheila Seal, Nadine Collins, William Warren, and Michael R. Stratton.
- 1387 Linkage of Familial Wilms' Tumor Predisposition to Chromosome 19 and a Two-Locus Model for the Etiology of Familial Tumors.** J. Matthew McDonald, Edwin C. Douglass, Ross Fisher, Clementina F. Geiser, Carl E. Krill, Louise C. Strong, David Virshup, and Vicki Huff.
- 1391 Down-Regulation of Homeobox Gene *GBX2* Expression Inhibits Human Prostate Cancer Clonogenic Ability and Tumorigenicity.** Allen C. Gao, Wei Lou, and John T. Isaacs.
- 1395 Increased Incidence of Matrix Metalloproteinases in Urine of Cancer Patients.** Marsha A. Moses, Dmitri Wiederschain, Kevin R. Loughlin, David Zurakowski, Carolyn C. Lamb, and Michael R. Freeman.
- 1400 DNA Interstrand Cross-Links Induced by Psoralen Are Not Repaired in Mammalian Mitochondria.** Carleen Cullinane and Vilhelm A. Bohr.
- 1405 Molecular Detection of Genetic Alterations in the Serum of Colorectal Cancer Patients.** Kenji Hibi, C. Rahj Robinson, Susan Booker, Li Wu, Stanley R. Hamilton, David Sidransky, and Jin Jen.

Review

- 1408 The Unique Physiology of Solid Tumors: Opportunities (and Problems) for Cancer Therapy.** J. Martin Brown and Amato J. Giaccia.

Regular Articles

Biochemistry and Biophysics

- 1417 A Relevant Dose of 4-(Methylnitrosamino)-1-(3-pyridyl)-1-butanone Is Extensively Metabolized and Rapidly Absorbed in the Canine Tracheal Mucosa.** Per Gerde, Bruce A. Muggenburg, Tony Stephens, Johnnye L. Lewis, Kee H. Pyon, and Alan R. Dahl.
- 1423 Differential Selectivity of Ligands for the C1a and C1b Phorbol Ester Binding Domains of Protein Kinase C δ : Possible Correlation with Tumor-promoting Activity.** Krisztina Bögi, Patricia S. Lorenzo, Zoltán Szállási, Péter Ács, Gerhardt S. Wagner, and Peter M. Blumberg.

Carcinogenesis

- 1429 Overexpression of the Myristoylated Alanine-rich C Kinase Substrate in Human Choroidal Melanoma Cells Affects Cell Proliferation.** Stéphane Manenti, François Malecaze, Hugues Chap, and Jean-Marie Darbon.
- 1435 Topical Retinoic Acid Reduces Skin Papilloma Formation but Resistant Papillomas Are at High Risk for Malignant Conversion.** Tamar Tennenbaum, David Lowry, Nadine Darwiche, David L. Morgan, Marina Gartsbein, Laura Hansen, Luigi M. De Luca, Henry Hennings, and Stuart H. Yuspa.
- 1444 Differential Expression of Methionine Adenosyltransferase Genes Influences the Rate of Growth of Human Hepatocellular Carcinoma Cells.** Jiaxin Cai, Zebin Mao, Jung-Joo Hwang, and Shelly C. Lu.

Clinical Investigations

- 1451 **Prognostic Value of P53 Gene Mutations in a Large Series of Node-negative Breast Cancer Patients.** Nicole Falette, Marie-Pierre PAPERIN, Isabelle Treilleux, Anne-Christelle Gratadour, Nadine Peloux, Hervé Mignotte, Nigel Tooke, Esfir Löfman, Mats Inganäs, Alain Bremond, Mehmet Ozurk, and Alain Puisieux.
- 1456 **Combined Nested RT-PCR Assay for Prostate-specific Antigen and Prostate-specific Membrane Antigen in Prostate Cancer Patients: Correlation with Pathological Stage.** Ying Z. Grasso, Manjula K. Gupta, Howard S. Levin, Craig D. Zippe, and Eric A. Klein.

Experimental Therapeutics

- 1460 **Chinese Hamster Ovary Cells Resistant to the Topoisomerase II Catalytic Inhibitor ICRF-159: A Tyr49Phe Mutation Confers High-Level Resistance to Bisdioxopiperazines.** Maxwell Sehested, Irene Wessel, Lars H. Jensen, Bente Holm, Roberto S. Oliveri, Sue Kenwright, Andrew M. Creighton, John L. Nitiss, and Peter B. Jensen.

Immunology

- 1469 **Mice Transgenic for Human Carcinoembryonic Antigen as a Model for Immunotherapy.** Patrick Clarke, Jeffrey Mann, Jean F. Simpson, Karen Rickard-Dickson, and F. James Primus.
- 1478 **Interleukin 2 Expression by Tumor Cells Alters Both the Immune Response and the Tumor Microenvironment.** Jungeun Lee, Bruce M. Fenton, Cameron J. Koch, John G. Frelinger, and Edith M. Lord.
- 1486 **Reduction of Established Spontaneous Mammary Carcinoma Metastases following Immunotherapy with Major Histocompatibility Complex Class II and B7.1 Cell-based Tumor Vaccines.** Beth A. Pulaski and Suzanne Ostrand-Rosenberg.

Molecular Biology and Genetics

- 1494 **Clinicopathological Significance of Altered Loci of Replication Error and Microsatellite Instability-associated Mutations in Gastric Cancer.** Ming-Shiang Wu, Chung-Wei Lee, Chia-Tung Shun, Hsiu-Po Wang, Wei-Jei Lee, Jin-Chuan Sheu, and Jaw-Town Lin.
- 1498 **Direct Modulation of Tumor Suppressor *Connexin 26* Gene by Human Chorionic Gonadotropin in Rat Mammary Glands.** Shaojin You, Zheng-Jin Tu, and David T. Kiang.
- 1503 **Characteristic Pattern of Chromosomal Gains and Losses in Merkel Cell Carcinoma Detected by Comparative Genomic Hybridization.** Mireille Van Gele, Frank Speleman, Jo Vandesompele, Nadine Van Roy, and J. Helen Leonard.

- 1509 **Inhibition of Growth of Malignant Rat Prostate Tumor Cells by Restoration of Fibroblast Growth Factor Receptor 2.** Akio Matsubara, Mikio Kan, Shuju Feng, and Wallace L. McKeehan.
- 1515 **Down-Regulation of the Novel Gene *Melastatin* Correlates with Potential for Melanoma Metastasis.** Lyn M. Duncan, Jim Deeds, John Hunter, Jing Shao, Lisa M. Holmgren, Elizabeth A. Woolf, Robert I. Tepper, and Andrew W. Shyjan.
- 1521 **Comparative Decreases in Tyrosinase, TRP-1, TRP-2, and Pmel 17/Silver Antigenic Proteins from Melanotic to Amelanotic Stages of Syngeneic Mouse Cutaneous Melanomas and Metastases.** Seth J. Orlow, Willys K. Silvers, Bao-Kang Zhou, and Beatrice Mintz.

Tumor Biology

- 1524 **Role of Nitric Oxide and Superoxide Anion in Elimination of Low Metastatic Human Colorectal Carcinomas by Unstimulated Hepatic Sinusoidal Endothelial Cells.** Kirsten H. Edmiston, Yutaka Shoji, Takayuki Mizoi, Rosilyn Ford, Alexander Nachman, and J. Milburn Jessup.
- 1532 **Regulation of Interleukin 8 Expression in Human Malignant Melanoma Cells.** Rakesh K. Singh and Michelle L. Varney.
- 1538 **Overexpressed WAF1/Cip1 Renders Glioblastoma Cells Resistant to Chemotherapy Agents 1,3-Bis(2-chloroethyl)-1-nitrosourea and Cisplatin.** Sanbao Ruan, M. Fatih Okcu, Jiang Ping Ren, Paul Chiao, Michael Andreeff, Victor Levin, and Wei Zhang.
- 1544 **Enhanced Expression of $\alpha(1,3)$ -Fucosyltransferase Genes Correlates with E-selectin-mediated Adhesion and Metastatic Potential of Human Lung Adenocarcinoma Cells.** Mireia Martín-Satué, Rosabel Marrugat, José A. Cancelas, and Jerónimo Blanco.
- 1551 **Regulation of Expression of Thymidine Phosphorylase/Platelet-derived Endothelial Cell Growth Factor in Human Colon Carcinoma Cells.** Edward L. Schwartz, Emily Wan, Fu-Shen Wang, and Nicole Baptiste.
- 1558 **Expression of Human Telomerase Subunits and Correlation with Telomerase Activity in Cervical Cancer.** Masahiro Takakura, Satoru Kyo, Taro Kanaya, Masaaki Tanaka, and Masaki Inoue.
- 1562 ***In Vivo* Electron Paramagnetic Resonance Imaging of Tumor Heterogeneity and Oxygenation in a Murine Model.** Periannan Kuppusamy, Mobae Afeworki, Ravi A. Shankar, Deborah Coffin, Murali C. Krishna, Stephen M. Hahn, James B. Mitchell, and Jay L. Zweier.
- 1569 **Targeted Disruption of the $\beta 1$ Integrin Gene in a Lymphoma Cell Line Greatly Reduces Metastatic Capacity.** Peter J. M. Stroeken, Ellen A. M. van Rijthoven, Martin A. van der Valk, and Ed Roos.

1578 Announcements

1998 Annual Meeting
Future Annual Meetings of the AACR
Workshop on Molecular Biology and Pathology of Cancer
Workshop on Molecular Biology in Clinical Oncology
Workshop on Methods in Clinical Cancer Research
AACR Special Conferences in Cancer Research
Recent Deaths
Calendar of Events

AACR forms available
in the back of this issue:

Application for Active and
Corresponding Membership

Application for Associate
Membership

Also available in the back
of this issue:

Guidelines for Submitting Disks to
AACR Publications

1580 Erratum

J. C. Rice and B. W. Futscher, Proc. Am. Assoc. Cancer Res., 39: 30 (#202), 1998.

1581 Author Index

Cancer Research

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

58 (7)

Cancer Res 1998;58:1325-1580.

Updated version Access the most recent version of this article at:
<http://cancerres.aacrjournals.org/content/58/7.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/58/7.citation>. Click on "Request Permissions" which will take you to the Copyright Clearance Center's (CCC) Rightslink site.