



## CONTENTS

### Advances in Brief

- 5201 Carcinoma-associated Expression of Core 2  $\beta$ -1,6-*N*-Acetylglucosaminyltransferase Gene in Human Colorectal Cancer: Role of O-Glycans in Tumor Progression.** Kazuhisa Shimodaira, Jun Nakayama, Naoshi Nakamura, Osamu Hasebe, Tsutomu Katsuyama, and Minoru Fukuda.
- 5207 Absence of Fhit Protein in Primary Lung Tumors and Cell Lines with *FHIT* Gene Abnormalities.** Gabriella Sozzi, Silvana Tornielli, Elda Tagliabue, Laura Sard, Francesco Pezzella, Ugo Pastorino, Fabiola Minoletti, Silvana Pilotti, Cathy Ratcliffe, Maria Luisa Veronese, Peter Goldstraw, Kay Huebner, Carlo M. Croce, and Marco A. Pierotti.
- 5213 Patterns of Chromosomal Alterations in Metastasizing and Non-metastasizing Primary Head and Neck Carcinomas.** Ulrike Bockmühl, Simone Petersen, Sven Schmidt, Günter Wolf, Volker Jahnke, Manfred Dietel, and Iver Petersen.
- 5217 Intracellular Localization of p53 Tumor Suppressor Protein in  $\gamma$ -irradiated Cells Is Cell Cycle Regulated and Determined by the Nucleus.** Elena A. Komarova, Carolyn R. Zelnick, Dot Chin, Marija Zeremski, Anatoly S. Gleiberman, Sarah S. Bacus, and Andrei V. Gudkov.
- 5221 *MMAC1/PTEN* Mutations in Primary Tumor Specimens and Tumor Cell Lines.** David H-F. Teng, Rong Hu, Huai Lin, Thaylon Davis, Diana Iliev, Cheryl Frye, Brad Swedlund, Kipp L. Hansen, Vickie L. Vinson, Kathryn L. Gumper, Lee Ellis, Adel El-Naggar, Marsha Frazier, Samar Jasser, Lauren A. Langford, Jeff Lee, Gordon B. Mills, Mark A. Pershouse, Raphael E. Pollack, Carmen Tornos, Patricia Troncoso, W. K. Alfred Yung, Gregory Fujii, Amy Berson, Robert Bookstein, Joseph B. Bolen, Sean V. Tavtigian, and Peter A. Steck.
- 5226 Expression of PACE4 in Chemically Induced Carcinomas Is Associated with Spindle Cell Tumor Conversion and Increased Invasive Ability.** Frank C. Hubbard, Tamra L. Goodrow, Shao-Chen Liu, Murray H. Brilliant, Paul Basset, Richard E. Mains, and Andres J. P. Klein-Szanto.
- 5232 Evidence That the Multidrug Resistance Protein (MRP) Functions as a Co-Transporter of Glutathione and Natural Product Toxins.** Germana Rappa, Aurelio Lorico, Richard A. Flavell, and Alan C. Sartorelli.
- 5238 Disruption of the Murine *MRP* (Multidrug Resistance Protein) Gene Leads to Increased Sensitivity to Etoposide (VP-16) and Increased Levels of Glutathione.** Aurelio Lorico, Germana Rappa, Rick A. Finch, Di Yang, Richard A. Flavell, and Alan C. Sartorelli.
- 5243 NADH Dehydrogenase Deficiency in an Apoptosis-resistant Mutant Isolated from a Human HL-60 Leukemia Cell Line.** Akihiro Kataoka, Masaru Kubota, Ken-ichiro Watanabe, Machiko Sawada, Seiji Koishi, Ying Wei Lin, Ikuya Usami, Yuichi Akiyama, Toshiyuki Kitoh, and Kenshi Furusho.
- 5246 Liposomal Doxorubicin Circumvents PSC 833-Free Drug Interactions, Resulting in Effective Therapy of Multidrug-resistant Solid Tumors.** Rajesh Krishna and Lawrence D. Mayer.
- 5254 *PTEN/MMAC1* Mutations and *EGFR* Amplification in Glioblastomas.** Wanguo Liu, C. David James, Lori Frederick, Benjamin E. Alderete, and Robert B. Jenkins.
- 5258 The Use of Exfoliative Cell Samples to Map Clonal Genetic Alterations in the Oral Epithelium of High-Risk Patients.** Miriam P. Rosin, Joel B. Epstein, Ken Berean, Scott Durham, John Hay, Xing Cheng, Tao Zeng, Yongqian Huang, and Lewei Zhang.
- 5261 Human Tumor Blood Flow Is Enhanced by Nicotinamide and Carbogen Breathing.** Melanie E. B. Powell, Sally A. Hill, Michele I. Saunders, Peter J. Hoskin, and David J. Chaplin.
- 5265 Overexpression of Manganese Superoxide Dismutase Selectively Modulates the Activity of Jun-associated Transcription Factors in Fibrosarcoma Cells.** Kelley K. Kinningham and Daret K. St. Clair.
- 5272 Galectin-3: A Novel Antiapoptotic Molecule with A Functional BH1 (NWGR) Domain of Bcl-2 Family.** Shiro Akahani, Pratima Nangia-Makker, Hidenori Inohara, Hyeong-Reh Choi Kim, and Avraham Raz.
- 5277 Human Angiostatin Inhibits Murine Hemangioblastoma Tumor Growth *in Vivo*.** Brian J. Lannutti, Stephen T. Gately, M. Eugenia Quevedo, Gerald A. Soff, and Amy S. Paller.
- 5281 Vascular Endothelial Growth Factor Is a Predictor of Relapse and Stage Progression in Superficial Bladder Cancer.** Jeremy P. Crew, Tim O'Brien, Mike Bradburn, Sue Fuggle, Roy Bicknell, David Cranston, and Adrian L. Harris.

### Regular Articles

#### Experimental Therapeutics

- 5286 Murine Susceptibility to Radiation-induced Pulmonary Fibrosis Is Influenced by a Genetic Factor Implicated in Susceptibility to Bleomycin-induced Pulmonary Fibrosis.** Christina K. Haston and Elizabeth L. Travis.
- 5292 Transient Induction of the *MRP/GS-X* Pump and  $\gamma$ -Glutamylcysteine Synthetase by 1-(4-Amino-2-methyl-5-pyrimidinyl)methyl-3-(2-chloroethyl)-3-nitrosourea in Human Glioma Cells.** Akira Gomi, Souji Shinoda, Toshio Masuzawa, Toshihisa Ishikawa, and M. Tien Kuo.
- 5300 The Protein Kinase C Activators Phorbol Esters and Phosphatidylserine Inhibit Neutral Sphingomyelinase Activation, Ceramide Generation, and Apoptosis Triggered by Daunorubicin.** Véronique Mansat, Guy Laurent, Thierry Levade, Ali Betaïeb, and Jean-Pierre Jaffrézou.
- 5305 Intravenous Administration of Irinotecan Elevates the Blood  $\beta$ -Glucuronidase Activity in Rats.** Norimasa Kaneda, Akinobu Kurita, Yukiko Hosokawa, Teruo Yokokura, and Shoji Awazu.
- 5309 Improved Treatment of Medullary Thyroid Cancer in a Nude Mouse Model by Combined Radioimmunotherapy: Doxorubicin Potentiates the Therapeutic Efficacy of Radiolabeled Antibodies in a Radioresistant Tumor Type.** Thomas M. Behr, Erik Wulst, Sven Radetzky, Rosalyn D. Blumenthal, Robert M. Dunn, Stefan Gratz, Margret Rave-Fränk, Heinz Schmidberger, Friedhelm Raue, and Wolfgang Becker.

## Immunology

- 5320 **T-cell Receptor Repertoire in Matched MART-1 Peptide-stimulated Peripheral Blood Lymphocytes and Tumor-infiltrating Lymphocytes.** David J. Cole, Michael C. Wilson, Licia Rivoltini, Mary Custer, and Michael I. Nishimura.

## Molecular Biology and Genetics

- 5328 **V-SRC Induces Expression of Hypoxia-inducible Factor 1 (HIF-1) and Transcription of Genes Encoding Vascular Endothelial Growth Factor and Enolase 1: Involvement of HIF-1 in Tumor Progression.** Bing-Hua Jiang, Faton Agani, Antonino Passaniti, and Gregg L. Semenza.
- 5336 **Low Frequency of p16/CDKN2A Methylation in Sporadic Melanoma: Comparative Approaches for Methylation Analysis of Primary Tumors.** Mark L. Gonzalgo, Christina M. Bender, Edward H. You, J. Michael Glendening, José F. Flores, Graeme J. Walker, Nicholas K. Hayward, Peter A. Jones, and Jane W. Fountain.
- 5348 **Enforced Expression of the M<sub>r</sub> 33,000 Pim-1 Kinase Enhances Factor-independent Survival and Inhibits Apoptosis in Murine Myeloid Cells.** Michael Lilly and Andrew Kraft
- 5356 **Genomic Organization and Mutation Analysis of Hel-N1 in Lung Cancers with Chromosome 9p21 Deletions.** Paul Cairns, Kenji Okami, Peter King, Julia Bonacum, Steve Ahrendt, Li Wu, Li Mao, Jin Jen, and David Sidransky.

## Tumor Biology

- 5360 **Role of O<sup>6</sup>-Methylguanine-DNA Methyltransferase in the Resistance of Pancreatic Tumors to DNA Alkylating Agents.** Demetrius M. Kokkinakis, Mansoor M. Ahmed, Ruby Delgado, Mushdaq M. Fruitwala, Mohammed Mohiuddin, and Jorge Albores-Saavedra.
- 5369 **Fibroblast Growth Factor Receptor 2 Limits and Receptor 1 Accelerates Tumorigenicity of Prostate Epithelial Cells.** Shuju Feng, Fen Wang, Akio Matsubara, Mikio Kan, and Wallace L. McKeehan.
- 5379 **Molecular Evidence That Most but not All Carcinosarcomas of the Uterus Are Combination Tumors.** Hiroko Wada, Takayuki Enomoto, Masami Fujita, Kiyoshi Yoshino, Ryuichi Nakashima, Hirohisa Kurachi, Tomoko Haba, Kenichi Wakasa, Kenneth R. Shroyer, Masahiko Tsujimoto, Tadashi Hongyo, Taisei Nomura, and Yuji Murata.
- 5386 **The Osteoclast-associated Protease Cathepsin K Is Expressed in Human Breast Carcinoma.** Amanda J. Littlewood-Evans, Graeme Bilbe, Wayne B. Bowler, David Farley, Brenda Wlodarski, Toshio Kokubo, Tetsuya Inaoka, John Sloane, Dean B. Evans, and James A. Gallagher.

- 5391 **Met and Hepatocyte Growth Factor/Scatter Factor Expression in Human Gliomas.** Shahriar Koochekpour, Michael Jeffers, Shen Rulong, Gregory Taylor, Eric Klineberg, Eric A. Hudson, James H. Resau, and George F. Vande Woude.

- 5399 **Expression of Multiple Endocrine Neoplasia 2B RET in Neuroblastoma Cells Alters Cell Adhesion *in Vitro*, Enhances Metastatic Behavior *in Vivo*, and Activates Jun Kinase.** Glenn M. Marshall, Anne E. Peaston, Jayne E. Hocker, Stewart A. Smith, Loen M. Hansford, Vivienne Tobias, Murray D. Norris, Michelle Haber, Darrin P. Smith, Maria J. Lorenzo, Bruce A. J. Ponder, and John F. Hancock.

- 5406 **Methyl-p-hydroxyphenyllactate-esterase Activity in Breast Cancer: A Potentially New Prognostic Factor in Short-Term Follow-up.** Arnaldo Carbone, Fabio Giosuè Serra, Gabriella Ferrandina, Giovanni Scambia, Daniela Terribile, Rocco Bellantone, Mauro Piantelli, and Franco Oreste Ranelli.

- 5410 **Epidermal Growth Factor Regulates Protein Kinase A Activity in Murine Fibrosarcoma Cells: Differences between Metastatic and Nonmetastatic Tumor Cell Variants.** Daniel Fishman, Lubov Galitzki, Esther Priel, and Shraga Segal.

- 5416 **Fibronectin Secretion from Human Peritoneal Tissue Induces M<sub>r</sub> 92,000 Type IV Collagenase Expression and Invasion in Ovarian Cancer Cell Lines.** Kiyosumi Shibata, Fumitaka Kikkawa, Akihiro Nawa, Nobuhiko Suganuma, and Michinari Hamaguchi.

- 5421 **Vascular Endothelial Growth Factor Up-Regulates Its Receptor *fms*-like Tyrosine Kinase 1 (FLT-1) and a Soluble Variant of FLT-1 in Human Vascular Endothelial Cells.** Bernhard Barleon, Gerhard Siemeister, Georg Martiny-Baron, Karin Weindel, Christel Herzog, and Dieter Marmé.

- 5426 **Posttranscriptional Regulation of Protein Expression in Human Epithelial Carcinoma Cells by Adenine-Uridine-Rich Elements in the 3'-Untranslated Region of Tumor Necrosis Factor- $\alpha$  Messenger RNA.** Enhong Wang, Wei-Jun Ma, Carol Aghajanian, and David R. Spriggs

## Letters to the Editor

- 5434 **Correspondence re: J. S. DeFrank *et al.*, p53-null Cells Are More Sensitive to Ultraviolet Light Only in the Presence of Caffeine. *Cancer Res.*, 56: 5365-5368, 1996.** Martin S. Smith and Albert J. Fornace, Jr. Reply by Simon Powell and Jeffrey De Frank.

## 5437 Announcements

1998 Annual Meeting  
Future Annual Meetings of the AACR  
Gertrude B. Elion Cancer Research  
Award  
AACR Research Fellowships  
AACR Special Conferences in Cancer  
Research  
Recent Deaths  
Calendar of Events

## 5440 Author Index

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

# Cancer Research

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

## 57 (23)

*Cancer Res* 1997;57:5201-5439.

**Updated version** Access the most recent version of this article at:  
<http://cancerres.aacrjournals.org/content/57/23.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/57/23.citation>. Click on "Request Permissions" which will take you to the Copyright Clearance Center's (CCC) Rightslink site.