

# Cancer Research

A Journal of the American Association for Cancer Research

Volume 67 • Number 22

November 15, 2007 • Pages 10627–11092

## Reviews

**Targeting Vacuolar H<sup>+</sup>-ATPases as a New Strategy against Cancer.** Stefano Fais, Angelo De Milito, Haiyan You, and Wenxin Qin .....10627

**Integrated Endoplasmic Reticulum Stress Responses in Cancer.** Michel Moenner, Olivier Pluquet, Marion Boucheareilh, and Eric Chevet.....10631

## Meeting Reports

**Meeting Report: The 11th International Conference on Differentiation Therapy and Innovative Therapeutics in Oncology.** Laurent Delva, Arthur Zelent, Tomoki Naoe, Pierre Fenaux, Samuel Waxman, Laurent Degos, and Christine Chomienne .....10635

**Meeting Report on the 13th International Conference on Human Retrovirology: Human T-Cell Leukemia Virus Research 30 Years after Adult T-Cell Leukemia.** Masao Matsuoka, Toshiki Watanabe, Mari Kannagi, Charles Bangham, Ralph Grassmann, Susan J. Marriott, Patrick Green, and Kuan-Teh Jeang.....10638

## Priority Reports

**Role of GLI2 Transcription Factor in Growth and Tumorigenicity of Prostate Cells.** Saravanan Thiyagarajan, Neehar Bhatia, Shannon Reagan-Shaw, Diana Cozma, Andrei Thomas-Tikhonenko, Nihal Ahmad, and Vladimir S. Spiegelman .....10642

**$\Delta$ DNMT3B Variants Regulate DNA Methylation in a Promoter-Specific Manner.** Jie Wang, Manisha Bhutani, Ashutosh K. Pathak, Wenhua Lang, Hening Ren, Jaroslav Jelinek, Rong He, Lanlan Shen, Jean-Pierre Issa, and Li Mao .....10647

**Treatment of Invasive Retinoblastoma in a Murine Model Using an Oncolytic Picornavirus.** Lalita Wadhwa, Mary Y. Hurwitz, Patricia Chévez-Barrios, and Richard L. Hurwitz .....10653

**A Polycomb Repression Signature in Metastatic Prostate Cancer Predicts Cancer Outcome.** Jindan Yu, Jianjun Yu, Daniel R. Rhodes, Scott A. Tomlins, Xuhong Cao, Guoan Chen, Rohit Mehra, Xiaoju Wang, Debashis Ghosh, Rajal B. Shah, Sooryanarayana Varambally, Kenneth J. Pienta, and Arul M. Chinnaiyan .....10657

**Matrix Metalloproteinases-1 and -8 Improve the Distribution and Efficacy of an Oncolytic Virus.** Wilson Mok, Yves Boucher, and Rakesh K. Jain .....10664

## Molecular Biology, Pathobiology, and Genetics

**High Expression of Lymphocyte-Associated Genes in Node-Negative HER2+ Breast Cancers Correlates with Lower Recurrence Rates.** Gabriela Alexe, Gul S. Dalgin, Daniel Scandfeld, Pablo Tamayo, Jill P. Mesirov, Charles DeLisi, Lyndsay Harris, Nicola Barnard, Maritza Martel, Arnold J. Levine, Shridar Ganesan, and Gyan Bhanot .....10669

**Overexpression of N-Myc Rapidly Causes Acute Myeloid Leukemia in Mice.** Hiroyuki Kawagoe, Ayten Kandilci, Tanya A. Kranenburg, and Gerard C. Grosveld.....10677

**Human Papillomavirus 16/18 E6 Oncoprotein Is Expressed in Lung Cancer and Related with p53 Inactivation.** Ya-Wen Cheng, Ming-Fang Wu, John Wang, Kun-Tu Yeh, Yih-Gang Goan, Hui-Ling Chiou, Chih-Yi Chen, and Huei Lee.....10686

**Cyclooxygenase-2 Is a Target Gene of Rho GDP Dissociation Inhibitor  $\beta$  in Breast Cancer Cells.** Dario Schunke, Paul Span, Henrike Ronneburg, Angela Dittmer, Martina Vetter, Hans-Jürgen Holzhausen, Eva Kantelhardt, Sylke Krenkel, Volkmar Müller, Fred C.G.J. Sweep, Christoph Thomssen, and Jürgen Dittmer .....10694

**Gene Expression Analysis of Angioimmunoblastic Lymphoma Indicates Derivation from T Follicular Helper Cells and Vascular Endothelial Growth Factor Deregulation.** Pier Paolo Piccaluga, Claudio Agostinelli, Andrea Califano, Antonino Carbone, Luca Fantoni, Sergio Ferrari, Anna Gazzola, Annunziata Gloghini, Simona Righi, Maura Rossi, Enrico Tagliafico, Pier Luigi Zinzani, Simonetta Zupo, Michele Baccarani, and Stefano A. Pileri .....10703

**Microtubule Disruption and Tumor Suppression by Mitogen-Activated Protein Kinase Phosphatase 4.** Yuangang Liu, James Lagowski, Aaron Sundholm, Alexandra Sundberg, and Molly Kulesz-Martin .....10711

**Characterization of a Novel Tumor-Suppressor Gene *PLC $\delta$ 1* at 3p22 in Esophageal Squamous Cell Carcinoma.** Li Fu, Yan-Ru Qin, Dan Xie, Liang Hu, Dora L. Kwong, Gopesh Srivastava, Sai Wah Tsao, and Xin-Yuan Guan.....10720

**Frequent Loss of Brm Expression in Gastric Cancer Correlates with Histologic Features and Differentiation State.** Nobutake Yamamichi, Ken-ichi Inada, Masao Ichinose, Mitsue Yamamichi-Nishina, Taketoshi Mizutani, Hirotaka Watanabe, Kazuya Shigama, Mitsuhiro Fujishiro, Takuya Okazaki, Naohisa Yahagi, Takeshi Haraguchi, Shuji Fujita, Yutaka Tsutsumi, Masao Omata, and Hideo Iba.....10727

**Common and Distinct Genomic Events in Sporadic Colorectal Cancer and Diverse Cancer Types.** Eric S. Martin, Giovanni Tonon, Raktim Sinha, Yonghong Xiao, Bin Feng, Alec C. Kimmelman, Alexei Protopopov, Elena Ivanova, Cameron Brennan, Kate Montgomery, Raju Kucherlapati, Gerald Bailey, Mark Redston, Lynda Chin, and Ronald A. DePinho .....10736

**Anoikis, Initiated by Mcl-1 Degradation and Bim Induction, Is Deregulated during Oncogenesis.** Nicholas T. Woods, Hirohito Yamaguchi, Francis Y. Lee, Kapil N. Bhalla, and Hong-Gang Wang .....10744

**Examination of *IGF2* and *H19* Loss of Imprinting in Bladder Cancer.** Hyang-Min Byun, Hui-Lee Wong, Elliott Aaron Birnstein, Erika M. Wolff, Gangning Liang, and Allen S. Yang .....10753

**The Lysine 831 of Vascular Endothelial Growth Factor Receptor 1 Is a Novel Target of Methylation by SMYD3.** Masaki Kunizaki, Ryuji Hamamoto, Fabio Pittella Silva, Kiyoshi Yamaguchi, Takeshi Nagayasu, Masabumi Shibuya, Yusuke Nakamura, and Yoichi Furukawa .....10759

## Contents (Continued)

**Prolonged Chronic Inflammation Progresses to Dysplasia in a Novel Rat Model of Colitis-Associated Colon Cancer.** Cariluz Santiago, Beatriz Pagán, Angel A. Isidro, and Caroline B. Appleyard .....10766

**Heat Shock Protein B8, a Cyclin-Dependent Kinase-Independent Cyclin D1 Target Gene, Contributes to Its Effects on Radiation Sensitivity.** Sally Trent, Chuanwei Yang, Cuiqi Li, Mary Lynch, and Emmett V. Schmidt.....10774

**Genome-Scale MicroRNA and Small Interfering RNA Screens Identify Small RNA Modulators of TRAIL-Induced Apoptosis Pathway.** Dmitry Ovcharenko, Kevin Kelnar, Charles Johnson, Nan Leng, and David Brown.....10782

**Pirh2 Promotes Ubiquitin-Dependent Degradation of the Cyclin-Dependent Kinase Inhibitor p27<sup>Kip1</sup>.** Takayuki Hattori, Tomoyasu Isobe, Kenji Abe, Hiroto Kikuchi, Kyoko Kitagawa, Toshiaki Oda, Chiharu Uchida, and Masatoshi Kitagawa.....10789

**Distinct Loci Influence Radiation-Induced Alveolitis from Fibrosing Alveolitis in the Mouse.** Christina K. Haston, Michelle Begin, Genevieve Dorion, and Sean M. Cory.....10796

### Cell, Tumor, and Stem Cell Biology

**Metformin Inhibits Mammalian Target of Rapamycin-Dependent Translation Initiation in Breast Cancer Cells.** Ryan J.O. Dowling, Mahvash Zakikhani, I. George Fantus, Michael Pollak, and Nahum Sonenberg .....10804

**Endostatin Binding to Ovarian Cancer Cells Inhibits Peritoneal Attachment and Dissemination.** Yumi Yokoyama, Gerald Sedgewick, and S. Ramakrishnan.....10813

**Reactive Oxygen Species Regulate Angiogenesis and Tumor Growth through Vascular Endothelial Growth Factor.** Chang Xia, Qiao Meng, Ling-Zhi Liu, Yongyut Rojanasakul, Xin-Ru Wang, and Bing-Hua Jiang .....10823

**Activation of Hepatic Stem Cell Marker EpCAM by Wnt- $\beta$ -Catenin Signaling in Hepatocellular Carcinoma.** Taro Yamashita, Anuradha Budhu, Marshonna Forgues, and Xin Wei Wang.....10831

**Placental Growth Factor-1 Attenuates Vascular Endothelial Growth Factor-A-Dependent Tumor Angiogenesis during  $\beta$  Cell Carcinogenesis.** Tibor Schomber, Lucie Kopfstein, Valentin Djonov, Imke Albrecht, Vanessa Baeriswyl, Karin Strittmatter, and Gerhard Christofori .....10840

**RNA Interference Inhibition of Matrix Metalloproteinase-1 Prevents Melanoma Metastasis by Reducing Tumor Collagenase Activity and Angiogenesis.** Jessica S. Blackburn, C. Harker Rhodes, Charles I. Coon, and Constance E. Brinckerhoff.....10849

**PCPH/ENTPD5 Expression Enhances the Invasiveness of Human Prostate Cancer Cells by a Protein Kinase C $\delta$ -Dependent Mechanism.** Joaquín Villar, María Isabel Arenas, Caitlin M. MacCarthy, María José Blázquez, Oscar M. Tirado, and Vicente Notario .....10859

**Cathepsin E Prevents Tumor Growth and Metastasis by Catalyzing the Proteolytic Release of Soluble TRAIL from Tumor Cell Surface.** Tomoyo Kawakubo, Kuniaki Okamoto, Jun-ichi Iwata, Masashi Shin, Yoshiko Okamoto, Atsushi Yasukochi, Keichi I. Nakayama, Tomoko Kadowaki, Takayuki Tsukuba, and Kenji Yamamoto .....10869

**Deregulated Activity of Akt in Epithelial Basal Cells Induces Spontaneous Tumors and Heightened Sensitivity to Skin Carcinogenesis.** Carmen Segrelles, Jerry Lu, Brian Hammann, Mirentxu Santos, Marta Moral, José Luis Cascallana, M. Fernanda Lara, Okkyung Rho, Steve Carbajal, Jeanine Traag, Linda Beltrán, Ana Belén Martínez-Cruz, Ramón García-Escudero, Corina Lorz, Sergio Ruiz, Ana Bravo, Jesús M. Paramio, and John DiGiovanni.....10879

**Spontaneous Expression of Embryonic Factors and p53 Point Mutations in Aged Mesenchymal Stem Cells: A Model of Age-Related Tumorigenesis In Mice.** Hanchen Li, Xueli Fan, Ramesh C. Kovi, Yunju Jo, Brian Moquin, Richard Konz, Calin Stoicov, Evelyn Kurt-Jones, Steven R. Grossman, Steven Lyle, Arlin B. Rogers, Marshall Montrose, and JeanMarie Houghton .....10889

**Deregulated Overexpression of hCdt1 and hCdc6 Promotes Malignant Behavior.** Michalis Liontos, Marilena Koutsami, Maria Sideridou, Konstantinos Evangelou, Dimitris Kletsas, Brynn Levy, Athanassios Kotsinas, Odelia Nahum, Vassilis Zoumpourlis, Mirsini Kouloukoussa, Zoi Lygerou, Stavros Taraviras, Christos Kittas, Jirina Bartkova, Athanasios G. Papavassiliou, Jiri Bartek, Thanos D. Halazonetis, and Vassilis G. Gorgoulis .....10899

### Experimental Therapeutics, Molecular Targets, and Chemical Biology

**Silencing of Prion Protein Sensitizes Breast Adriamycin-Resistant Carcinoma Cells to TRAIL-Mediated Cell Death.** Franck Meslin, Ahmed Hamaï, Ping Gao, Abdelali Jalil, Nathalie Cahuzac, Salem Chouaib, and Maryam Mehrpour .....10910

**HIV-1 Protease Inhibitors Nelfinavir and Atazanavir Induce Malignant Glioma Death by Triggering Endoplasmic Reticulum Stress.** Peter Pyrko, Adel Kardosh, Weijun Wang, Wenyong Xiong, Axel H. Schönthal, and Thomas C. Chen.....10920

**Transient Receptor Potential Melastatin 7-like Current in Human Head and Neck Carcinoma Cells: Role in Cell Proliferation.** Jie Jiang, Ming-Hua Li, Koichi Inoue, Xiang-Ping Chu, Joshua Seeds, and Zhi-Gang Xiong .....10929

**Lymphoma Chemovirotherapy: CD20-Targeted and Convertase-Armed Measles Virus Can Synergize with Fludarabine.** Guy Ungerechts, Christoph Springfeld, Marie E. Frenzke, Johanna Lampe, Patrick B. Johnston, William B. Parker, Eric J. Sorscher, and Roberto Cattaneo.....10939

**The Extra-domain A of Fibronectin Is a Vascular Marker of Solid Tumors and Metastases.** Jascha-N. Rybak, Christoph Roesli, Manuela Kaspar, Alessandra Villa, and Dario Neri.....10948

**Peptide-Mediated Targeting to Tumor Blood Vessels of Lung Cancer for Drug Delivery.** Tong-Young Lee, Chin-Tarng Lin, Szu-Yao Kuo, De-Kuan Chang, and Han-Chung Wu .....10958

**Nitric Oxide-Donating Aspirin Derivatives Suppress Microsatellite Instability in Mismatch Repair-Deficient and Hereditary Nonpolyposis Colorectal Cancer Cells.** Michael A. McIlhatton, Jessica Tyler, Susan Burkholder, Josef Ruschoff, Basil Rigas, Levy Kopelovich, and Richard Fishel .....10966

**Therapeutic Efficacy of a Novel Focal Adhesion Kinase Inhibitor TAE226 in Ovarian Carcinoma.** Jyotsnabaran Halder, Yvonne G. Lin, William M. Merritt, Whitney A. Spannuth, Alpa M. Nick, Toshiyuki Honda, Aparna A. Kamat, Liz Y. Han, Tae Jin Kim, Chunhua Lu, Ana M. Tari, William Bornmann, Ariel Fernandez, Gabriel Lopez-Berestein, and Anil K. Sood .....10976

## Contents (*Continued*)

**Chemosensitization of B-Cell Lymphomas by Methylseleninic Acid Involves Nuclear Factor- $\kappa$ B Inhibition and the Rapid Generation of Other Selenium Species.** Simone Jülicher, Heidi Goenaga-Infante, T. Andrew Lister, Jude Fitzgibbon, and Simon P. Joel .....10984

**Probabilistic Modeling of DNA Mismatch Repair Effects on Cell Cycle Dynamics and Iododeoxyuridine-DNA Incorporation.** Evren Gurkan, Jane E. Schupp, Mohammad A. Aziz, Timothy J. Kinsella, and Kenneth A. Loparo.....10993

**The Oncogenic microRNA-27a Targets Genes That Regulate Specificity Protein Transcription Factors and the G<sub>2</sub>-M Checkpoint in MDA-MB-231 Breast Cancer Cells.** Susanne U. Mertens-Talcott, Sudhakar Chintharlapalli, Xiangrong Li, and Stephen Safe .....11001

**Erlotinib (Tarceva, OSI-774) Antagonizes ATP-Binding Cassette Subfamily B Member 1 and ATP-Binding Cassette Subfamily G Member 2-Mediated Drug Resistance.** Zhi Shi, Xing-Xiang Peng, In-Wha Kim, Suneet Shukla, Qiu-Sheng Si, Robert W. Robey, Susan E. Bates, Tong Shen, Charles R. Ashby, Jr., Li-Wu Fu, Suresh V. Ambudkar, and Zhe-Sheng Chen.....11012

### Immunology

**Mechanism of All-*Trans* Retinoic Acid Effect on Tumor-Associated Myeloid-Derived Suppressor Cells.** Yulia Nefedova, Mayer Fishman, Simon Sherman, Xingyu Wang, Amer A. Beg, and Dmitry I. Gibrilovich .....11021

**Chimeric NKG2D-Modified T Cells Inhibit Systemic T-Cell Lymphoma Growth in a Manner Involving Multiple Cytokines and Cytotoxic Pathways.** Tong Zhang, Amorette Barber, and Charles L. Sentman .....11029

**Antimetastatic Activity of a Preventive Cancer Vaccine.** Patrizia Nanni, Giordano Nicoletti, Arianna Palladini, Stefania Croci, Annalisa Murgo, Agnese Antognoli, Lorena Landuzzi, Marina Fabbi, Silvano Ferrini, Piero Musiani, Manuela Iezzi, Carla De Giovanni, and Pier-Luigi Lollini.....11037

### Endocrinology

**16-kDa Prolactin Inhibits Endothelial Cell Migration by Down-Regulating the Ras-Tiam1-Rac1-Pak1 Signaling Pathway.** Sok-Hyong Lee, Jeannette Kunz, Sue-Hwa Lin, and Li-yuan Yu-Lee .....11045

**Cell Cycle-Dependent Nuclear Export of Phosphatase and Tensin Homologue Tumor Suppressor Is Regulated by the Phosphoinositide-3-Kinase Signaling Cascade.** Juinn-Lin Liu, Zhenyu Mao, Tiffany A. LaFortune, Marta M. Alonso, Gary E. Gallick, Juan Fueyo, and W.K. Alfred Yung.....11054

**KCl Cotransporter-3 Down-regulates E-Cadherin/ $\beta$ -Catenin Complex to Promote Epithelial-Mesenchymal Transition.** Yueh-Mei Hsu, Yih-Fung Chen, Cheng-Yang Chou, Ming-Jer Tang, Ji Hshiang Chen, Robert J. Wilkins, J. Clive Ellory, and Meng-Ru Shen .....11064

### Epidemiology

**Childhood Social Environment and Risk of Non-Hodgkin Lymphoma in Adults.** Karin Ekström Smedby, Henrik Hjalgrim, Ellen T. Chang, Klaus Rostgaard, Bengt Glimelius, Hans-Olov Adami, and Mads Melbye .....11074

### Prevention

**Dietary Feeding of Silibinin Inhibits Prostate Tumor Growth and Progression in Transgenic Adenocarcinoma of the Mouse Prostate Model.** Komal Raina, Marie-José Blouin, Rana P. Singh, Noreen Majeed, Gagan Deep, Leyon Varghese, L. Michael Glodé, Norman M. Greenberg, David Hwang, Pinchas Cohen, Michael N. Pollak, and Rajesh Agarwal .....11083

### Correction

**Correction: Virus-Induced Phagocytes Impede Glioma Viral Therapy.....11092**

# Cancer Research

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

## 67 (22)

*Cancer Res* 2007;67:10627-11092.

<b>Updated version</b>	Access the most recent version of this article at: <a href="http://cancerres.aacrjournals.org/content/67/22">http://cancerres.aacrjournals.org/content/67/22</a>
<b>Supplementary Material</b>	Access the most recent supplemental material at: <a href="http://cancerres.aacrjournals.org/content/suppl/2008/02/04/67.22.DC1">http://cancerres.aacrjournals.org/content/suppl/2008/02/04/67.22.DC1</a>

<b>E-mail alerts</b>	<a href="#">Sign up to receive free email-alerts</a> related to this article or journal.
----------------------	--

<b>Reprints and Subscriptions</b>	To order reprints of this article or to subscribe to the journal, contact the AACR Publications Department at <a href="mailto:pubs@aacr.org">pubs@aacr.org</a> .
-----------------------------------	--

<b>Permissions</b>	To request permission to re-use all or part of this article, use this link <a href="http://cancerres.aacrjournals.org/content/67/22">http://cancerres.aacrjournals.org/content/67/22</a> . Click on "Request Permissions" which will take you to the Copyright Clearance Center's (CCC) Rightslink site.
--------------------	--