

Cancer Research

A Journal of the American Association for Cancer Research

Volume 69 • Number 13

July 1, 2009 • Pages 5269–5618

AACR Centennial Series

Cancer Prevention: From 1727 to Milestones of the Past 100 Years. Scott M. Lippman and Ernest T. Hawk.....5269

Reviews

Lessons from an Aggressive Cancer: Evolutionary Dynamics in Esophageal Carcinoma. Christoph A. Klein and Nikolas H. Stoecklein5285

Aneuploidy: Cancer's Fatal Flaw? Bret R. Williams and Angelika Amon5289

Perspectives in Cancer Research

MDA-MB-435 and M14 Cell Lines: Identical but not M14 Melanoma? Ann F. Chambers.....5292

Meeting Report

Building Scientific Progress without Borders: Nanobiology and Nanomedicine in China and the U.S. Paul C. Wang, Robert P. Blumenthal, Yuliang Zhao, Julie A. Schneider, Nancy Miller, Piotr Grodzinski, Michael M. Gottesman, Sally Tinkle, Kuan Wang, Chen Wang, and Xing-Jie Liang5294

Priority Reports

A "Vascular Normalization Index" as Potential Mechanistic Biomarker to Predict Survival after a Single Dose of Cediranib in Recurrent Glioblastoma Patients. A. Gregory Sorensen, Tracy T. Batchelor, Wei-Ting Zhang, Poe-Jou Chen, Priscilla Yeo, Meiyun Wang, Dominique Jennings, Patrick Y. Wen, Johanna Lahdenranta, Marek Ancukiewicz, Emmanuelle di Tomaso, Dan G. Duda, and Rakesh K. Jain5296

Functional Phosphodiesterase 11A Mutations May Modify the Risk of Familial and Bilateral Testicular Germ Cell Tumors. Anelia Horvath, Larissa Korde, Mark H. Greene, Rossella Libe, Paulo Osorio, Fabio Rueda Faucez, Marie Laure Raffin-Sanson, Kit Man Tsang, Limor Drori-Herishanu, Yianna Patronas, Elaine F. Remmers, Maria Eleni Nikita, Jason Moran, Joseph Greene, Maria Nesterova, Maria Merino, Jerome Bertherat, and Constantine A. Stratakis5301

Bortezomib Alone or in Combination with the Histone Deacetylase Inhibitor JNJ-26481585: Effect on Myeloma Bone Disease in the 5T2MM Murine Model of Myeloma. Sarah Deleu, Miguel Lemaire, Janine Arts, Eline Menu, Els Van Valckenborgh, Isabelle Vande Broek, Hendrik De Raeye, Les Coulton, Ben Van Camp, Peter Croucher, and Karin Vanderkerken5307

Cell, Tumor, and Stem Cell Biology

Active Notch1 Confers a Transformed Phenotype to Primary Human Melanocytes. Chelsea C. Pinnix, John T. Lee, Zhao-Jun Liu, Ronan McDaid, Klara Balint, Levi J. Beverly, Patricia A. Brafford, Min Xiao, Benjamin Himes, Susan E. Zabierowski, Yumi Yashiro-Ohtani, Katherine L. Nathanson, Ana Bengston, Pamela M. Pollock, Ashani T. Weeraratna, Brian J. Nickoloff, Warren S. Pear, Anthony J. Capobianco, and Meenhard Herlyn.....5312

Smad2 and Smad3 Phosphorylated at Both Linker and COOH-Terminal Regions Transmit Malignant TGF- β Signal in Later Stages of Human Colorectal Cancer. Koichi Matsuzaki, Chiaki Kitano, Miki Murata, Go Sekimoto, Katsunori Yoshida, Yoshiko Uemura, Toshihito Seki, Shigeru Taketani, Jun-ichi Fujisawa, and Kazuichi Okazaki5321

Long-term Cultures of Bone Marrow-Derived Human Mesenchymal Stem Cells Frequently Undergo Spontaneous Malignant Transformation. Gro Vatne Røslund, Agnete Svendsen, Anja Torsvik, Ewa Sobala, Emmet McCormack, Heike Immervoll, Josef Mysliwicz, Joerg-Christian Tonn, Roland Goldbrunner, Per Eystein Lønning, Rolf Bjerkgvig, and Christian Schichor5331

Ferritin Heavy Chain-Mediated Iron Homeostasis and Subsequent Increased Reactive Oxygen Species Production Are Essential for Epithelial-Mesenchymal Transition. Ke-Hua Zhang, Hong-Yu Tian, Xia Gao, Wei-Wei Lei, Ying Hu, Dong-Mei Wang, Xin-Chao Pan, Mei-Lan Yu, Gen-Jun Xu, Fu-Kun Zhao, and Jian-Guo Song.....5340

Phosphoglucose Isomerase/Autocrine Motility Factor Mediates Epithelial and Mesenchymal Phenotype Conversions in Breast Cancer. Tatsuyoshi Funasaka, Victor Hogan, and Avraham Raz5349

Nanoscale Cellular Changes in Field Carcinogenesis Detected by Partial Wave Spectroscopy. Hariharan Subramanian, Hemant K. Roy, Prabhakar Pradhan, Michael J. Goldberg, Joseph Muldoon, Randall E. Brand, Charles Sturgis, Thomas Hensing, Daniel Ray, Andrej Bogojevic, Jameel Mohammed, Jeen-Soo Chang, and Vadim Backman5357

A Novel Lung Metastasis Signature Links Wnt Signaling with Cancer Cell Self-Renewal and Epithelial-Mesenchymal Transition in Basal-like Breast Cancer. Theresa A. DiMeo, Kristen Anderson, Pushkar Phadke, Chang Feng, Charles M. Perou, Steven Naber, and Charlotte Kuperwasser5364

β_1 Integrin Cytoplasmic Variants Differentially Regulate Expression of the Antiangiogenic Extracellular Matrix Protein Thrombospondin 1. Hira Lal Goel, Loredana Moro, Joanne E. Murphy-Ullrich, Chung-Cheng Hsieh, Chin-Lee Wu, Zhong Jiang, and Lucia R. Languino5374

Clinical Research

Lymphopenia as a Prognostic Factor for Overall Survival in Advanced Carcinomas, Sarcomas, and Lymphomas. Isabelle Ray-Coquard, Claire Cropet, Martine Van Glabbeke, Catherine Sebban, Axel Le Cesne, Ian Judson, Olivier Tredan, Jaap Verweij, Pierre Biron, Inthidar Labidi, Jean-Paul Guastalla, Thomas Bachelot, David Perol, Sylvie Chabaud, Pancras C.W. Hogendoorn, Philippe Cassier, Armelle Dufresne, and Jean-Yves Blay on behalf of the European Organization for Research and Treatment of Cancer Soft Tissue and Bone Sarcoma Group5383

Endocrinology

Subcellular Localization of Cyclic AMP-Responsive Element Binding Protein-Regulated Transcription Coactivator 2 Provides a Link between Obesity and Breast Cancer in Postmenopausal Women. Kristy A. Brown, Kerry J. McInnes, Nicole I. Hunger, Jonathan S. Oakhill, Gregory R. Steinberg, and Evan R. Simpson.....5392

Contents (Continued)

Epidemiology

Insulin-like Growth Factor-II Methylation Status in Lymphocyte DNA and Colon Cancer Risk in the Northern Sweden Health and Disease Cohort. Rudolf Kaaks, Pär Stattin, Stéphanie Villar, Anna R. Poetsch, Laure Dossus, Alexandra Nieters, Elio Riboli, Richard Palmqvist, Göran Hallmans, Christoph Plass, and Marlin D. Friesen5400

Experimental Therapeutics, Molecular Targets, and Chemical Biology

Comparative Analysis of the Membrane Proteome of Closely Related Metastatic and Nonmetastatic Tumor Cells. Christoph Roesli, Beatrice Borgia, Christoph Schliemann, Maja Gunthert, Heidi Wunderli-Allenspach, Raffaella Giavazzi, and Dario Neri5406

Stimulating the GPR30 Estrogen Receptor with a Novel Tamoxifen Analogue Activates SF-1 and Promotes Endometrial Cell Proliferation. Benjamin C. Lin, Miyuki Suzawa, Raymond D. Blind, Sandra C. Tobias, Serdar E. Bulun, Thomas S. Scanlan, and Holly A. Ingraham5415

Spleen Tyrosine Kinase Is Overexpressed and Represents a Potential Therapeutic Target in Chronic Lymphocytic Leukemia. Maike Buchner, Simon Fuchs, Gabriele Prinz, Dietmar Pfeifer, Kilian Bartholomé, Meike Burger, Nina Chevalier, Laurent Vallat, Jens Timmer, John G. Gribben, Hassan Jumaa, Hendrik Veelken, Christine Dierks, and Katja Zirlik5424

Differential Response of Glioma Cells to FOXO1-Directed Therapy. Cara J. Lau, Zaf Koty, and Josephine Nalbantoglu5433

Dual Activity Lysophosphatidic Acid Receptor Pan-Antagonist/Autotaxin Inhibitor Reduces Breast Cancer Cell Migration *In vitro* and Causes Tumor Regression *In vivo*. Honglu Zhang, Xiaoyu Xu, Joanna Gajewiak, Ryoko Tsukahara, Yuko Fujiwara, Jianxiong Liu, James I. Fells, Donna Perygin, Abby L. Parrill, Gabor Tigyi, and Glenn D. Prestwich5441

Increased Manganese Superoxide Dismutase Expression or Treatment with Manganese Porphyrin Potentiates Dexamethasone-Induced Apoptosis in Lymphoma Cells. Melba C. Jaramillo, Jennifer B. Frye, James D. Crapo, Margaret M. Briehl, and Margaret E. Tome5450

A Ruthenium-Containing Organometallic Compound Reduces Tumor Growth through Induction of the Endoplasmic Reticulum Stress Gene *CHOP*. Xiangjun Meng, Mili L. Leyva, Marjorie Jenny, Isabelle Gross, Samir Benosman, Bastien Fricker, Sébastien Harlepp, Pascal Hébraud, Anne Boos, Pauline Wlosik, Pierre Bischoff, Claude Sirlin, Michel Pfeffer, Jean-Philippe Loeffler, and Christian Gaiddon5458

Therapeutics by Cytotoxic Metabolite Accumulation: Pemetrexed Causes ZMP Accumulation, AMPK Activation, and Mammalian Target of Rapamycin Inhibition. Alexandra C. Racanelli, Scott B. Rothbart, Cortney L. Heyer, and Richard G. Moran5467

The Inhibitor of Apoptosis Protein Livin (ML-IAP) Plays a Dual Role in Tumorigenicity. Ihab Abd-Elrahman, Klilah Hershko, Tzahi Neuman, Boaz Nachmias, Riki Perlman, and Dina Ben-Yehuda5475

Immunology

Murine Gammaherpesvirus 68 Infection of IFN γ Unresponsive Mice: A Small Animal Model for Gammaherpesvirus-Associated B-Cell Lymphoproliferative Disease. Katherine S. Lee, Steve D. Groshong, Carlyne D. Cool, Bette K. Kleinschmidt-DeMasters, and Linda F. van Dyk5481

T-Regulatory Cells Shift from a Protective Anti-Inflammatory to a Cancer-Promoting Proinflammatory Phenotype in Polyposis. Elias Gounaris, Nichole R. Blatner, Kristen Dennis, Fay Magnusson, Michael F. Gurish, Terry B. Strom, Philipp Beckhove, Fotini Gounari, and Khashayarsha Khazaie5490

Efficacy of Levo-1-Methyl Tryptophan and Dextro-1-Methyl Tryptophan in Reversing Indoleamine-2,3-Dioxygenase-Mediated Arrest of T-Cell Proliferation in Human Epithelial Ovarian Cancer. Feng Qian, Jeannine Villella, Paul K. Wallace, Paulette Mhaweche-Fauceglia, Joseph D. Tario, Jr., Christopher Andrews, Junko Matsuzaki, Danila Valmori, Maha Ayyoub, Peter J. Frederick, Amy Beck, Jianqun Liao, Richard Cheney, Kirsten Moysich, Shashikant Lele, Protul Shrikant, Lloyd J. Old, and Kunle Odunsi5498

Expression of WSX1 in Tumors Sensitizes IL-27 Signaling-Independent Natural Killer Cell Surveillance. Denada Dibra, Jeffrey J. Cutrera, Xueqing Xia, Mark P. Birkenbach, and Shulin Li5505

The Liver Is a Site for Tumor-Induced Myeloid-Derived Suppressor Cell Accumulation and Immunosuppression. Dan Ilkovic and Diana M. Lope5514

Malignant B Cells Skew the Balance of Regulatory T Cells and T_H17 Cells in B-Cell Non-Hodgkin's Lymphoma. Zhi-Zhang Yang, Anne J. Novak, Steven C. Ziesmer, Thomas E. Witzig, and Stephen M. Ansell5522

Molecular Biology, Pathobiology, and Genetics

Microcephalin Regulates BRCA2 and Rad51-Associated DNA Double-Strand Break Repair. Xianglin Wu, Gourish Mondal, Xianshu Wang, Jianmin Wu, Lin Yang, Vernon S. Pankratz, Matthew Rowley, and Fergus J. Couch5531

Plasminogen Kringle 5 Induces Apoptosis of Brain Microvessel Endothelial Cells: Sensitization by Radiation and Requirement for GRP78 and LRP1. Braden C. McFarland, Jerry Stewart, Jr., Amal Hamza, Robert Nordal, Donald J. Davidson, Jack Henkin, and Candace L. Gladson5537

ADAM23 Negatively Modulates $\alpha_v\beta_3$ Integrin Activation during Metastasis. Newton V. Verbisck, Érico T. Costa, Fabrício F. Costa, Felícia P. Cavalher, Michele D.M. Costa, Angelita Muras, Valéria A. Paixão, Ricardo Moura, Mariana F. Granato, Daniela F Ierardi, Tamara Machado, Fabiana Melo, Karina B. Ribeiro, Isabela W. Cunha, Vladimir C.C. Lima, Maria do Socorro Maciel, André L. Carvalho, Fernando F. Soares, Silvio Zanata, Mari C. Sogayar, Roger Chammas, and Anamaria A. Camargo5546

miR-15a and miR-16 Are Implicated in Cell Cycle Regulation in a Rb-Dependent Manner and Are Frequently Deleted or Down-regulated in Non-Small Cell Lung Cancer. Nora Bandi, Samuel Zbinden, Mathias Gugger, Marlene Arnold, Verena Kocher, Lara Hasan, Andreas Kappeler, Thomas Brunner, and Erik Vassella5553

Contents (Continued)

Cell Survival under Stress Is Enhanced by a Mitochondrial ATP-Binding Cassette Transporter That Regulates Hemoproteins. John Lynch, Yu Fukuda, Partha Krishnamurthy, Guoqing Du, and John D. Schuetz5560

Evaluation of the 8q24 Prostate Cancer Risk Locus and MYC Expression. Mark M. Pomerantz, Christine A. Beckwith, Meredith M. Regan, Stacia K. Wyman, Gyorgy Petrovics, Yongmei Chen, Dorota J. Hawksworth, Fredrick R. Schumacher, Lorelei Mucci, Kathryn L. Penney, Meir J. Stampfer, Jennifer A. Chan, Kristin G. Ardlie, Brian R. Fritz, Rachael K. Parkin, Daniel W. Lin, Michelle Dyke, Paula Herman, Steve Lee, William K. Oh, Philip W. Kantoff, Muneesh Tewari, David G. McLeod, Shiv Srivastava, and Matthew L. Freedman.....5568

Prevention

Antitumor Activity of Gemcitabine and Oxaliplatin Is Augmented by Thymoquinone in Pancreatic Cancer. Sanjeev Banerjee, Ahmed O. Kaseb, Zhiwei Wang, Deujan Kong, Mussop Mohammad, Subhash Padhye, Fazlul H. Sarkar, and Ramzi M. Mohammad.....5575

[6]-Gingerol Suppresses Colon Cancer Growth by Targeting Leukotriene A₄ Hydrolase. Chul-Ho Jeong, Ann M. Bode, Angelo Pugliese, Yong-Yeon Cho, Hong-Gyum Kim, Jung-Hyun Shim, Young-Jin Jeon, Honglin Li, Hualiang Jiang, and Zigang Dong.....5584

3,3'-Diindolylmethane Enhances Chemosensitivity of Multiple Chemotherapeutic Agents in Pancreatic Cancer. Sanjeev Banerjee, Zhiwei Wang, Deujan Kong, and Fazlul H. Sarkar5592

Tumor Microenvironment

Oncosome Formation in Prostate Cancer: Association with a Region of Frequent Chromosomal Deletion in Metastatic Disease. Dolores Di Vizio, Jayoung Kim, Martin H. Hager, Matteo Morello, Wei Yang, Christopher J. Lafargue, Lawrence D. True, Mark A. Rubin, Rosalyn M. Adam, Rameen Beroukhim, Francesca Demichelis, and Michael R. Freeman5601

Harnessing Competing Endocytic Pathways for Overcoming the Tumor-Blood Barrier: Magnetic Resonance Imaging and Near-Infrared Imaging of Bifunctional Contrast Media. Helena Sheikhet Migalovich, Vyacheslav Kalchenko, Nava Nevo, Gila Meir, Fortune Kohen, and Michal Neeman5610

Corrections

Correction: Article on Th17 for IFN γ -Mediated Papilloma Promotion5618

Correction: Article on Role of Angiopoietin-1 in Tumor Metastasis5618

Cancer Research

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

69 (13)

Cancer Res 2009;69:5269-5618.

Updated version Access the most recent version of this article at:
<http://cancerres.aacrjournals.org/content/69/13>

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/69/13>.
Click on "Request Permissions" which will take you to the Copyright Clearance Center's (CCC) Rightslink site.