

BREAKING ADVANCES

- 4253 | **Highlights from Recent
Cancer Literature**

REVIEWS

- 4255 | **Telomere Loss as a Mechanism for
Chromosome Instability in
Human Cancer**
John P. Murnane
- 4260 | **Distinct Biological Roles for the Akt
Family in Mammary Tumor Progression**
Rachelle L. Dillon and William J. Muller

- 4287 | **Histone Methyltransferase Gene
SETD2 Is a Novel Tumor Suppressor
Gene in Clear Cell Renal Cell
Carcinoma**
Gerben Duns, Eva van den Berg,
Inge van Duivenbode, Jan Osinga,
Harry Hollema, Robert M.W. Hofstra,
and Klaas Kok

- 4292 | **Antifungal Therapy with Itraconazole
Impairs the Anti-Lymphoma Effects
of Rituximab by Inhibiting
Recruitment of CD20 to Cell Surface
Lipid Rafts**
Ingo Ringshausen, Yvonne Feuerstacke,
Philipp Krainz, Jürgen den Hollander,
Ken Hermann, Andreas Buck,
Christian Peschel,
and Christian Meyer zum Bueschenfelde

MEETING REPORTS

- 4265 | **Strategic Workshops on Cancer
Nanotechnology**
Larry A. Nagahara, Jerry S.H. Lee,
Linda K. Molnar, Nicholas J. Panaro,
Dorothy Farrell, Krzysztof Ptak, Joseph Alper,
and Piotr Grodzinski
- 4269 | **Princess Takamatsu Symposium on
DNA Repair and Human Cancers**
Lawrence A. Loeb and Susumu Nishimura

CLINICAL STUDIES

- 4297 | **Oncolytic Adenovirus Coding for
Granulocyte Macrophage
Colony-Stimulating Factor Induces
Antitumoral Immunity in
Cancer Patients**
Vincenzo Cerullo, Sari Pesonen, Iulia Diaconu,
Sophie Escutenaire, Petteri T. Arstila,
Matteo Ugolini, Petri Nokisalmi, Mari Raki,
Leena Laasonen, Merja Särkioja,
Maria Rajcecki, Lotta Kangasniemi, Kilian Guse,
Andreas Helminen, Laura Ahtiainen,
Ari Ristimäki, Anne Räisänen-Sokolowski,
Elina Haavisto, Minna Oksanen, Eerika Karli,
Aila Karioja-Kallio, Sirkka-Liisa Holm,
Mauri Kouri, Timo Joensuu, Anna Kanerva,
and Akseli Hemminki

PRIORITY REPORTS

- 4274 | **Glioma Cell Populations Grouped by
Different Cell Type Markers Drive
Brain Tumor Growth**
Lars Prestegarden, Agnete Svendsen,
Jian Wang, Linda Sleire, Kai Ove Skaftnesmo,
Rolf Bjerkvig, Tao Yan, Lasse Askland,
Andreas Persson, Per Øystein Sakariassen,
and Per Øyvind Enger
- 4280 | **Notch1 Functions as a Tumor
Suppressor in a Model of
K-ras-Induced Pancreatic Ductal
Adenocarcinoma**
Linda Hanlon, Jacqueline L. Avila,
Renée M. Demarest, Scott Troutman,
Megan Allen, Francesca Ratti, Anil K. Rustgi,
Ben Z. Stanger, Fred Radtke, Volkan Adsay,
Fenella Long, Anthony J. Capobianco,
and Joseph L. Kissil

INTEGRATED SYSTEMS AND TECHNOLOGIES

- 4310 | **Breast Cancer Dormancy Can Be
Maintained by Small Numbers of
Micrometastases**
Lisa Willis, Tomas Alarcón, George Elia,
J. Louise Jones, Nick A. Wright,
Ian P.M. Tomlinson, Trevor A. Graham,
and Karen M. Page

4318 **Genome-Wide siRNA Screen for Modulators of Cell Death Induced by Proteasome Inhibitor Bortezomib**
Siquan Chen, Jonathan L. Blank, Theodore Peters, Xiaozhen J. Liu, David M. Rappoli, Michael D. Pickard, Saurabh Menon, Jie Yu, Denise L. Driscoll, Trupti Lingaraj, Anne L. Burkhardt, Wei Chen, Khristofer Garcia, Darshan S. Sappal, Jesse Gray, Paul Hales, Patrick J. Leroy, John Ringeling, Claudia Rabino, James J. Spelman, Jay P. Morgenstern, and Eric S. Lightcap

4375 **Interaction of Integrin-Linked Kinase and Miniature Chromosome Maintenance 7–Mediating Integrin α 7 Induced Cell Growth Suppression**
Yu-Chen Han, Yan P. Yu, Joel Nelson, Chuanyue Wu, Hui Wang, George K. Michalopoulos, and Jian-Hua Luo

4385 **14-3-3 Binding Sites in the Snail Protein Are Essential for Snail-Mediated Transcriptional Repression and Epithelial-Mesenchymal Differentiation**
Zhaoyuan Hou, Hongzhuang Peng, David E. White, Pu Wang, Paul M. Lieberman, Thanos Halazonetis, and Frank J. Rauscher III

MICROENVIRONMENT AND IMMUNOLOGY

4327 **Plasma Fibronectin Promotes Lung Metastasis by Contributions to Fibrin Clots and Tumor Cell Invasion**
Gunjan Malik, Lynn M. Knowles, Rajiv Dhir, Shuping Xu, Shuting Yang, Erkki Ruoslahti, and Jan Pilch

4335 **Immature Immunosuppressive CD14⁺HLA-DR^{-/low} Cells in Melanoma Patients Are Stat3^{hi} and Overexpress CD80, CD83, and DC-Sign**
Isabel Poschke, Dimitrios Mougiakakos, Johan Hansson, Giuseppe V. Masucci, and Rolf Kiessling

4346 **A Functional Receptor for B-Cell-Activating Factor Is Expressed on Human Acute Lymphoblastic Leukemias**
Reshmi Parameswaran, Markus Müschen, Yong-mi Kim, John Groffen, and Nora Heisterkamp

4394 **Epigenetic Mechanisms of Promigratory Chemokine CXCL14 Regulation in Human Prostate Cancer Cells**
Eun Young Song, Michael R. Shurin, Irina L. Tourkova, Dmitriy W. Gutkin, and Galina V. Shurin

4402 **A Role for BAF57 in Cell Cycle-Dependent Transcriptional Regulation by the SWI/SNF Chromatin Remodeling Complex**
Nasun Hah, Annemieke Kolkman, Donald D. Ruhl, W.W.M. Pim Pijnappel, Albert J.R. Heck, H.Th. Marc Timmers, and W. Lee Kraus

4412 **The Limitations of the G₁-S Checkpoint**
Dorothee Deckbar, Thomas Stiff, Barbara Koch, Caroline Reis, Markus Löbrich, and Penny A. Jeggo

4422 **Arrest Defective 1 Autoacetylation Is a Critical Step in Its Ability to Stimulate Cancer Cell Proliferation**
Ji Hae Seo, Jong-Ho Cha, Ji-Hyeon Park, Chul-Ho Jeong, Zee-Yong Park, Hye-Suk Lee, Seung Hyun Oh, Ju-Hee Kang, Se Won Suh, Kyoung Hoon Kim, Jun Yong Ha, Sang Hee Han, Se-Hee Kim, Ji-Won Lee, Jeong Ae Park, Joo-Won Jeong, Kong-Joo Lee, Goo Taeg Oh, Mi-Ni Lee, Sung Won Kwon, Seung-Ki Lee, Kwang-Hoon Chun, Su-Jae Lee, and Kyu-Won Kim

MOLECULAR AND CELLULAR PATHOBIOLOGY

4357 **A Novel Senescence-Evasion Mechanism Involving Grap2 and Cyclin D Interacting Protein Inactivation by Ras Associated with Diabetes in Cancer Cells under Doxorubicin Treatment**
Inkyoung Lee, Seon-Yong Yeom, Sook-Ja Lee, Won Ki Kang, and Chaehwa Park

4366 **Carcinomas Contain a Matrix Metalloproteinase-Resistant Isoform of Type I Collagen Exerting Selective Support to Invasion**
Elena Makareeva, Sejin Han, Juan Carlos Vera, Dan L. Sackett, Kenn Holmbeck, Charlotte L. Phillips, Robert Visse, Hideaki Nagase, and Sergey Leikin

PREVENTION AND EPIDEMIOLOGY

4433 **Persistent Cyclooxygenase-2 Inhibition Downregulates NF- κ B, Resulting in Chronic Intestinal Inflammation in the Min/+ Mouse Model of Colon Tumorigenesis**
Adelaide M. Carothers, Jennifer S. Davids, Beatrice C. Damas, and Monica M. Bertagnolli

4443 **Injectable Sustained Release Microparticles of Curcumin: A New Concept for Cancer Chemoprevention**
Komal Shahani, Suresh Kumar Swaminathan, Diana Freeman, Angela Blum, Linan Ma, and Jayanth Panyam

4453 **Pathway Analysis of Breast Cancer Genome-Wide Association Study Highlights Three Pathways and One Canonical Signaling Cascade**
Idan Menashe, Dennis Maeder, Montserrat Garcia-Closas, Jonine D. Figueroa, Samsiddhi Bhattacharjee, Melissa Rotunno, Peter Kraft, David J. Hunter, Stephen J. Chanock, Philip S. Rosenberg, and Nilanjan Chatterjee

THERAPEUTICS, TARGETS, AND CHEMICAL BIOLOGY

4460 **Inhibiting the Cyclin-Dependent Kinase CDK5 Blocks Pancreatic Cancer Formation and Progression through the Suppression of Ras-Ral Signaling**
Georg Feldmann, Anjali Mishra, Seung-Mo Hong, Savita Bisht, Christopher J. Strock, Douglas W. Ball, Michael Goggins, Anirban Maitra, and Barry D. Nelkin

4470 **Inhibition of Histone Deacetylase in Cancer Cells Slows Down Replication Forks, Activates Dormant Origins, and Induces DNA Damage**
Chiara Conti, Elisabetta Leo, Gabriel S. Eichler, Olivier Sordet, Melvenia M. Martin, Angela Fan, Mirit I. Aladjem, and Yves Pommier

4481 **Superior *In vivo* Efficacy of Afucosylated Trastuzumab in the Treatment of HER2-Amplified Breast Cancer**
Teemu T. Junttila, Kathryn Parsons, Christine Olsson, Yanmei Lu, Yan Xin, Julie Theriault, Lisa Crocker, Oliver Pabonan, Tomasz Baginski, Gloria Meng, Klara Totpal, Robert F. Kelley, and Mark X. Sliwkowski

4490 **Phosphorescent Light-Emitting Iridium Complexes Serve as a Hypoxia-Sensing Probe for Tumor Imaging in Living Animals**
Shaojuan Zhang, Masahiro Hosaka, Toshitada Yoshihara, Kazuya Negishi, Yasuhiko Iida, Seiji Tobita, and Toshiyuki Takeuchi

4499 **Tyrosine Kinase Inhibitor Gefitinib Enhances Topotecan Penetration of Gliomas**
Angel M. Carcaboso, Mohamed A. Elmeliegy, Jun Shen, Stephen J. Juel, Ziwei M. Zhang, Christopher Calabrese, Lorraine Tracey, Christopher M. Waters, and Clinton F. Stewart

4509 **The Skin Cancer Chemotherapeutic Agent Ingenol-3-Angelate (PEP005) Is a Substrate for the Epidermal Multidrug Transporter (ABCB1) and Targets Tumor Vasculature**
Luowei Li, Suneet Shukla, Andrew Lee, Susan H. Garfield, David J. Maloney, Suresh V. Ambudkar, and Stuart H. Yuspa

4520 **Intratumoral Therapy of Glioblastoma Multiforme Using Genetically Engineered Transferrin for Drug Delivery**
Dennis J. Yoon, Byron H. Kwan, Felix C. Chao, Theodore P. Nicolaidis, Joanna J. Phillips, Gretchen Y. Lam, Anne B. Mason, William A. Weiss, and Daniel T. Kamei

4528 **MicroRNA-21 in Pancreatic Cancer: Correlation with Clinical Outcome and Pharmacologic Aspects Underlying Its Role in the Modulation of Gemcitabine Activity**
Elisa Giovannetti, Nicola Funel, Godefridus J. Peters, Marco Del Chiaro, Leyla A. Erozcenci, Enrico Vasile, Leticia G. Leon, Luca E. Pollina, Annemieke Groen, Alfredo Falcone, Romano Danesi, Daniela Campani, Henk M. Verheul, and Ugo Boggi

4539 **Type III IFN Interleukin-28 Mediates the Antitumor Efficacy of Oncolytic Virus VSV in Immune-Competent Mouse Models of Cancer**
Phonphimon Wongthida, Rosa Maria Diaz, Feorillo Galivo, Timothy Kottke, Jill Thompson, Jose Pulido, Kevin Pavelko, Larry Pease, Alan Melcher, and Richard Vile

4550 **Targeted Nanoparticles That Deliver a Sustained, Specific Release of Paclitaxel to Irradiated Tumors**
Ralph J. Passarella, Daniel E. Spratt, Alice E. van der Ende, John G. Phillips, Hongmei Wu, Vasanth Sathiyakumar, Li Zhou, Dennis E. Hallahan, Eva Harth, and Roberto Diaz

4560 **Androgen Receptor Requires JunD as a Coactivator to Switch on an Oxidative Stress Generation Pathway in Prostate Cancer Cells**
Farideh Mehraein-Ghomi, Hiram S. Basu, Dawn R. Church, F. Michael Hoffmann, and George Wilding

- 4569 **Pathways of Proliferation and Antiapoptosis Driven in Breast Cancer Stem Cells by Stem Cell Protein Piwil2**
Jae Ho Lee, Cornelia Jung, Parisa Javadian-Elyaderani, Stefan Schweyer, Dorothea Schütte, Moneef Shoukier, Feridoun Karimi-Busheri, Michael Weinfeld, Aghdass Rasouli-Nia, Jan G. Hengstler, Alejandra Mantilla, Hamid Reza Soleimanpour-Lichaei, Wolfgang Engel, Craig N. Robson, and Karim Nayernia
- 4580 **Cadherin-11 Increases Migration and Invasion of Prostate Cancer Cells and Enhances their Interaction with Osteoblasts**
Chih-Fen Huang, Cristina Lira, Khoi Chu, Mehmet Asim Bilen, Yu-Chen Lee, Xiangcang Ye, Soo Mi Kim, Angelica Ortiz, Fe-Lin Lin Wu, Christopher J. Logothetis, Li-Yuan Yu-Lee, and Sue-Hwa Lin
- 4590 **Preventing the Activation or Cycling of the Rap1 GTPase Alters Adhesion and Cytoskeletal Dynamics and Blocks Metastatic Melanoma Cell Extravasation into the Lungs**
Spencer A. Freeman, Sarah J. McLeod, Janet Dukowski, Pamela Austin, Crystal C.Y. Lee, Brandie Millen-Martin, Paul Kubes, Donna-Marie McCafferty, Michael R. Gold, and Calvin D. Roskelley
- 4602 **CD117 and Stro-1 Identify Osteosarcoma Tumor-Initiating Cells Associated with Metastasis and Drug Resistance**
Amit S. Adhikari, Neeraj Agarwal, Byron M. Wood, Constance Porretta, Bernardo Ruiz, Radhika R. Pochampally, and Tomoo Iwakuma
- 4613 **E2F3a Is Critically Involved in Epidermal Growth Factor Receptor–Directed Proliferation in Ovarian Cancer**
Daniel Reimer, Michael Hubalek, Svenja Riedle, Sergej Skvortsov, Martin Erdel, Nicole Concin, Heidi Fiegl, Elisabeth Müller-Holzner, Christian Marth, Karl Illmensee, Peter Altevogt, and Alain G. Zeimet
- 4624 **CD44^{pos}CD49f^{hi}CD133/2^{hi} Defines Xenograft-Initiating Cells in Estrogen Receptor–Negative Breast Cancer**
Matthew J. Meyer, Jodie M. Fleming, Amy F. Lin, S. Amal Hussain, Erika Ginsburg, and Barbara K. Vonderhaar
- 4634 **Autotaxin Promotes Cancer Invasion via the Lysophosphatidic Acid Receptor 4: Participation of the Cyclic AMP/EPAC/Rac1 Signaling Pathway in Invadopodia Formation**
Kelly Harper, Dominique Arsenault, Stephanie Boulay-Jean, Annie Lauzier, Fabrice Lucien, and Claire M. Dubois
- 4644 **Autocrine Induction of Invasive and Metastatic Phenotypes by the MIF-CXCR4 Axis in Drug-Resistant Human Colon Cancer Cells**
Anne-Frédérique Dessein, Laurence Stechly, Nicolas Jonckheere, Patrick Dumont, Didier Monté, Emmanuelle Leteurtre, Stéphanie Truant, François-René Pruvot, Martin Figeac, Mohamed Hebbar, Charles-Henri Lecellier, Thécla Lesuffleur, Rodrigue Dessein, Georges Grard, Marie-José Dejonghe, Yvan de Launoit, Yasuhiro Furuichi, Grégoire Prévost, Nicole Porchet, Christian Gespach, and Guillemette Huet
- 4655 **Aurora-A Is Essential for the Tumorigenic Capacity and Chemoresistance of Colorectal Cancer Stem Cells**
Patrizia Cammareri, Alessandro Scopelliti, Matilde Todaro, Vincenzo Eterno, Federica Francescangeli, Mary Pat Moyer, Antonino Agrusa, Francesco Dieli, Ann Zeuner, and Giorgio Stassi
- 4666 **Regulation of Insulin-like Growth Factor–Mammalian Target of Rapamycin Signaling by MicroRNA in Childhood Adrenocortical Tumors**
Mabrouka Doghman, Abeer El Wakil, Bruno Cardinaud, Emilie Thomas, Jinling Wang, Wei Zhao, Maria Helena C. Peralta-Del Valle, Bonald C. Figueiredo, Gerard P. Zambetti, and Enzo Lalli
- 4676 **ADAMTS1 Contributes to the Acquisition of an Endothelial-like Phenotype in Plastic Tumor Cells**
Carmen Casal, Antoni Xavier Torres-Collado, María del Carmen Plaza-Calonge, Estefanía Martino-Echarri, Santiago Ramón y Cajal, Federico Rojo, Arjan W. Griffioen, and Juan Carlos Rodríguez-Manzaneque
- 4687 **Oncostatin M Renders Epithelial Cell Adhesion Molecule–Positive Liver Cancer Stem Cells Sensitive to 5-Fluorouracil by Inducing Hepatocytic Differentiation**
Taro Yamashita, Masao Honda, Kouki Nio, Yasunari Nakamoto, Tatsuya Yamashita, Hiroyuki Takamura, Takashi Tani, Yoh Zen, and Shuichi Kaneko

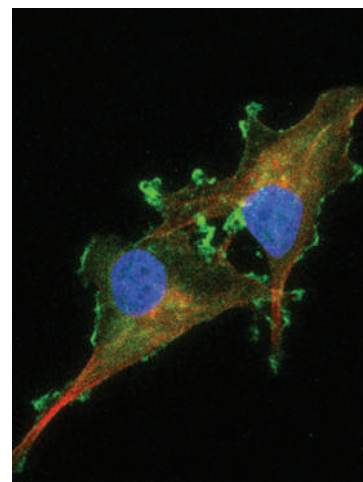
- 4698 **Tetraspanin CD151 Regulates Growth of Mammary Epithelial Cells in Three-Dimensional Extracellular Matrix: Implication for Mammary Ductal Carcinoma *In situ***
Vera Novitskaya, Hanna Romanska, Marwa Dawoud, J. Louise Jones, and Fedor Berditchevski
- 4709 **Activation of FOXO3a Is Sufficient to Reverse Mitogen-Activated Protein/Extracellular Signal-Regulated Kinase Kinase Inhibitor Chemoresistance in Human Cancer**
Jer-Yen Yang, Chun-Ju Chang, Weiya Xia, Yan Wang, Kwok-Kin Wong, Jeffrey A. Engelman, Yi Du, Michael Andreeff, Gabriel N. Hortobagyi, and Mien-Chie Hung
- 4719 **Downregulation of MicroRNA-200 in EBV-Associated Gastric Carcinoma**
Aya Shinozaki, Takashi Sakatani, Tetsuo Ushiku, Rumi Hino, Maya Isogai, Shunpei Ishikawa, Hiroshi Uozaki, Kenzo Takada, and Masashi Fukayama
- 4728 **The Fbw7 Tumor Suppressor Targets KLF5 for Ubiquitin-Mediated Degradation and Suppresses Breast Cell Proliferation**
Dong Zhao, Han-Qiu Zheng, Zhongmei Zhou, and Ceshi Chen
- 4739 **C-Propeptides of Procollagens I α 1 and II that Differentially Accumulate in Enchondromas versus Chondrosarcomas Regulate Tumor Cell Survival and Migration**
Jean-Baptiste Vincourt, Stéphanie Etienne, Justine Cottet, Camille Delaunay, Bantsimba Malanda, Frédéric Lionneton, François Sirveaux, Patrick Netter, François Plénat, Didier Mainard, Jean-Michel Vignaud, and Jacques Magdalou
- 4749 **ARF Suppresses Tumor Angiogenesis through Translational Control of VEGFA mRNA**
Hiroyuki Kawagishi, Hideaki Nakamura, Mitsuo Maruyama, Shuki Mizutani, Kazushi Sugimoto, Masatoshi Takagi, and Masataka Sugimoto
- 4759 **Optical Redox Ratio Differentiates Breast Cancer Cell Lines Based on Estrogen Receptor Status**
Julie Hanson Ostrander, Christine M. McMahon, Siya Lem, Stacy R. Millon, J. Quincy Brown, Victoria L. Seewaldt, and Nimmi Ramanujam
- 4767 **Novel Dyskerin-Mediated Mechanism of p53 Inactivation through Defective mRNA Translation**
Lorenzo Montanaro, Maria Calienni, Sara Bertoni, Laura Rocchi, Pasquale Sansone, Gianluca Storci, Donatella Santini, Claudio Ceccarelli, Mario Taffurelli, Domenica Carnicelli, Maurizio Brigotti, Massimiliano Bonafé, Davide Treré, and Massimo Derenzini
- 4778 **Estrogen Receptor β 1 Expression Is Regulated by miR-92 in Breast Cancer**
Hakeemah Al-Nakhle, Philip A. Burns, Michele Cummings, Andrew M. Hanby, Thomas A. Hughes, Sampoorna Satheesha, Abeer M. Shaaban, Laura Smith, and Valerie Speirs

CORRECTION

- 4785 **Correction: Online Publication Dates for *Cancer Research* April 15, 2010 Articles**

ABOUT THE COVER

Pancreatic cancer is among the most lethal of human malignancies, with a five year survival rate of ~4%. The overwhelming majority of pancreatic cancers have activating *KRAS* mutations; however, therapy targeting *KRAS* has been difficult. In the current study, Feldmann and colleagues show that inhibition of cyclin-dependent kinase 5 (CDK5) in pancreatic cancer cells results in decreased tumorigenicity and metastasis, mediated through suppression of Ras signaling through the Ral effector pathway. In this figure, Feldmann and colleagues show that inhibition of CDK5 in MIAPaCa-2 pancreatic cancer cells induces cytoskeletal changes and loss of polarity. For details, see the article by Feldmann and colleagues on page 4460 of this issue.



Cancer Research

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

70 (11)

Cancer Res 2010;70:4253-4786.

Updated version Access the most recent version of this article at:
<http://cancerres.aacrjournals.org/content/70/11>

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/70/11>.
Click on "Request Permissions" which will take you to the Copyright Clearance Center's (CCC) Rightslink site.