

BREAKING ADVANCES

- 9531 | **Highlights from Recent Cancer Literature**

REVIEW

- 9533 | **An Ex(o)citing Machinery for Invasive Tumor Growth**
An Hendrix, Wendy Westbrook, Marc Bracke, and Olivier De Wever
- 9538 | **Integration of Host-Related Signatures with Cancer Cell-Derived Predictors for the Optimal Management of Anticancer Chemotherapy**
Laurence Zitvogel, Oliver Kepp, Laetitia Aymeric, Yuting Ma, Clara Locher, Nicolas F. Delahaye, Fabrice André, and Guido Kroemer

PRIORITY REPORT

- 9544 | **Androgen-Induced *TMPRSS2:ERG* Fusion in Nonmalignant Prostate Epithelial Cells**
Nuria Coll Bastus, Lara K. Boyd, Xueying Mao, Elzbieta Stankiewicz, Sakunthala C. Kudahetti, R. Tim D. Oliver, Daniel M. Berney, and Yong-Jie Lu
- Précis:* Fusion genes can be induced in non-malignant epithelial cells and understanding the mechanisms will lead to improved cancer prevention.
- 9549 | **Adenovirus Targeting to Prostate-Specific Membrane Antigen through Virus-Displayed Semirandom Peptide Library Screening**
Ping Wu, Tarana A. Kudrolli, Wasim H. Chowdhury, Minzhi M. Liu, Ronald Rodriguez, and Shawn E. Lupold
- Précis:* Findings describe an effective new technology to target adenoviral gene therapy vectors.

CLINICAL STUDIES

- 9554 | **Genotypes of NK Cell KIR Receptors, Their Ligands, and Fcγ Receptors in the Response of Neuroblastoma Patients to Hu14.18-IL2 Immunotherapy**
David C. Delgado, Jacquelyn A. Hank, Jill Kolesar, David Lorentzen, Jacek Gan, Songwon Seo, KyungMann Kim, Suzanne Shusterman, Stephen D. Gillies, Ralph A. Reisfeld, Richard Yang, Brian Gadbaw, Kenneth B. DeSantes, Wendy B. London, Robert C. Seeger, John M. Maris, and Paul M. Sondel
- Précis:* Findings reveal genetic cues to immunotherapeutic responses, particularly those mediated by endogenous natural killer immune cells.

INTEGRATED SYSTEMS AND TECHNOLOGIES

- 9562 | **Molecular Histopathology by Spectrally Reconstructed Nonlinear Interferometric Vibrational Imaging**
Praveen D. Chowdary, Zhi Jiang, Eric J. Chaney, Wladimir A. Benalcazar, Daniel L. Marks, Martin Gruebele, and Stephen A. Boppart
- Précis:* Study findings could enable a method of real-time point-of-care imaging and diagnosis, providing opportunities to lower health care costs.
- 9570 | **MicroRNA miR-183 Functions as an Oncogene by Targeting the Transcription Factor *EGRI* and Promoting Tumor Cell Migration**
Aaron L. Sarver, Lihua Li, and Subbaya Subramanian
- Précis:* Findings reveal that upregulation of microRNA miR-183 in several types of cancer downregulates expression of the tumor suppressor genes *EGRI* and *PTEN*.

9581 **Melanoma Cells Express ICOS Ligand to Promote the Activation and Expansion of T-Regulatory Cells**

Natalia Martin-Orozco, Yufeng Li, Yijun Wang, Shijuan Liu, Patrick Hwu, Yong-Jun Liu, Chen Dong, and Laszlo Radvanyi

Précis: This study defines a T-cell co-receptor ligand expressed in melanoma cells that can strongly promote the formation of T-regulatory cells which mediate immune escape.

9591 **Tumor Ablation by Gene-Modified T Cells in the Absence of Autoimmunity**

Leanne X.J. Wang, Jennifer A. Westwood, Maria Moeller, Connie P.M. Duong, Wei-Zen Wei, Jordane Malaterre, Joseph A. Trapani, Paul Neeson, Mark J. Smyth, Michael H. Kershaw, and Phillip K. Darcy

Précis: This study demonstrates that adoptive transfer of genetically modified T-cells can specifically induce antitumor effects against established tumors in a self-antigen setting in the absence of autoimmunity.

9599 **Targeting STAT3 in Adoptively Transferred T Cells Promotes Their In Vivo Expansion and Antitumor Effects**

Maciej Kujawski, Chunyan Zhang, Andreas Herrmann, Karen Reckamp, Anna Scuto, Michael Jensen, Jiehui Deng, Stephen Forman, Robert Figlin, and Hua Yu

Précis: Systemic blockade of STAT3 signaling may produce beneficial effects at multiple levels, including in tumor cells, the tumor microenvironment, and antitumor T immune cells, in the latter case by improving cell expansion and antitumor functions.

9611 **IL-2 Costimulation Enables Statin-Mediated Activation of Human NK Cells, Preferentially through a Mechanism Involving CD56⁺ Dendritic Cells**

Georg Gruenbacher, Hubert Gander, Oliver Nussbaumer, Walter Nussbaumer, Andrea Rahm, and Martin Thurnher

Précis: Statins not only have direct antitumor effects but may also induce the activation of human NK cells via an intriguing subset of CD56⁺ dendritic cells to increase their antitumor efficacy.

9621

Cancer Exosomes Trigger Fibroblast to Myofibroblast Differentiation

Jason Webber, Robert Steadman, Malcolm D. Mason, Zsuzsanna Tabi, and Aled Clayton

Précis: By secreting intact vesicles known as exosomes, cancer cells may recruit myofibroblasts to support the development of a proinflammatory tissue microenvironment that nurtures tumor growth.

MOLECULAR AND CELLULAR PATHOBIOLOGY

9631

A Novel Signaling Axis of Matriptase/PDGF-D/ β -PDGFR in Human Prostate Cancer

Carolyn V. Ustach, Wei Huang, M. Katie Conley-LaComb, Chen-Yong Lin, Mingxin Che, Judith Abrams, and Hyeong-Reh Choi Kim

Précis: Findings define a signaling axis that links serine protease and growth factor signaling networks in prostate cancer, with implications for novel therapeutic strategies in this disease.

9641

An Illegitimate microRNA Target Site within the 3' UTR of MDM4 Affects Ovarian Cancer Progression and Chemosensitivity

Jessika Wynendaele, Anja Böhnke, Eleonora Leucci, Søren Jensby Nielsen, Irina Lambertz, Stefanie Hammer, Nadja Sbrzesny, Dana Kubitzka, Anja Wolf, Elise Gradhand, Katharina Balschun, Ioana Braicu, Jalid Sehoul, Silvia Darb-Esfahani, Carsten Denkert, Christoph Thomssen, Steffen Hauptmann, Anders Lund, Jean-Christophe Marine, and Frank Bartel

Précis: Findings illustrate how altering a microRNA target site can produce profound effects on carcinoma progression and tumor-related death.

9650

p53 Status in Stromal Fibroblasts Modulates Tumor Growth in an SDF1-Dependent Manner

Yoseph Addadi, Neta Moskovits, Dorit Granot, Guillermina Lozano, Yaron Carmi, Ron N. Apte, Michal Neeman, and Moshe Oren

Précis: A cell nonautonomous tumor suppressor role was found for p53 within stromal fibroblasts, affecting tumor progression by suppressing the production of tumor-stimulatory factors by these stroma cells.

- 9659 **Persistent Activation of the Fyn/ERK Kinase Signaling Axis Mediates Imatinib Resistance in Chronic Myelogenous Leukemia Cells through Upregulation of Intracellular SPARC**
Nina Fenouille, Alexandre Puissant, Maeva Dufies, Guillaume Robert, Arnaud Jacquiel, Mickaël Ohanna, Marcel Deckert, Jean-Max Pasquet, François-Xavier Mahon, Jill-Patrice Cassuto, Sophie Raynaud, Sophie Tartare-Deckert, and Patrick Auberger
- Précis: Insights into how to correct or defeat resistance to imatinib (Gleevec) are needed to further clinical management of chronic myelogenous leukemia.*
- 9671 **Gadd45a Functions as a Promoter or Suppressor of Breast Cancer Dependent on the Oncogenic Stress**
Jennifer S. Tront, Yajue Huang, Albert A. Fornace Jr., Barbara Hoffman, and Dan A. Liebermann
- Précis: Findings suggest mechanistic insights into how the stress sensor protein Gadd45a can act to either promote or restrict cancer progression.*
- 9682 **Genomic Deregulation during Metastasis of Renal Cell Carcinoma Implements a Myofibroblast-Like Program of Gene Expression**
Miguel A. López-Lago, Venkata J. Thodima, Asha Guttapalli, Timothy Chan, Adriana Heguy, Ana M. Molina, Victor E. Reuter, Robert J. Motzer, and Raju S. K. Chaganti
- Précis: Findings suggest that acquisition of a cancer-associated myofibroblast phenotype in cancer cells may be a critical contributor to metastatic capability.*
- 9693 **Combining ATR Suppression with Oncogenic Ras Synergistically Increases Genomic Instability, Causing Synthetic Lethality or Tumorigenesis in a Dosage-Dependent Manner**
Oren Gilad, Barzin Y. Nabet, Ryan L. Ragland, David W. Schoppy, Kevin D. Smith, Amy C. Durham, and Eric J. Brown
- Précis: Inhibiting the DNA damage checkpoint kinase ATR increases genomic instability more greatly when in the context of oncogenic stress, suggesting that targeting the ATR pathway may produce therapeutic benefit in cancer cells.*
- 9703 **Genomic Instability in Mice Is Greater in Fanconi Anemia Caused by Deficiency of *Fancd2* than *Fancg***
Ramune Reliene, Mitsuko L. Yamamoto, P. Nagesh Rao, and Robert H. Schiestl
- Précis: The Fanconi anemia gene Fancd2 functions in the maintenance of genomic stability in a manner that is distinct from its role as a component of the Fanconi anemia pathway.*
- 9711 **Transcription Factor NF-Y Induces Apoptosis in Cells Expressing Wild-Type p53 through E2F1 Upregulation and p53 Activation**
Aymone Gurtner, Paola Fuschi, Fabio Martelli, Isabella Manni, Simona Artuso, Giacomina Simonte, Valeria Ambrosino, Annalisa Antonini, Valentina Folgiero, Rita Falcioni, Ada Sacchi, and Giulia Piaggio
- Précis: Study reveals a critical upstream modifier of cell survival and cell cycle progression as regulated by the pivotal transcription factors p53 and E2F.*
- 9721 **Genome-Wide Interrogation Identifies *YAPI* Variants Associated with Survival of Small-Cell Lung Cancer Patients**
Chen Wu, Binghe Xu, Peng Yuan, Xiaoping Miao, Yu Liu, Yin Guan, Dianke Yu, Jian Xu, Tongwen Zhang, Hongbing Shen, Tangchun Wu, and Dongxin Lin
- Précis: Genetic variants in the YAPI gene were identified that may be prognostic of overall survival of SCLC treated with platinum-based chemotherapy.*
- 9730 **Negative Regulation of p53 by the Long Isoform of ErbB3 Binding Protein Ebp1 in Brain Tumors**
Chung Kwon Kim, Truong L.X. Nguyen, Kyeung Min Joo, Do-Hyun Nam, Jihye Park, Kyung-Hoon Lee, Sung-Woo Cho, and Jee-Yin Ahn
- Précis: Results define an positive modifier in brain tumorigenesis that predicts poor prognosis and functions by promoting p53 downregulation.*

9742

Common Breast Cancer Susceptibility Alleles and the Risk of Breast Cancer for *BRCA1* and *BRCA2* Mutation Carriers: Implications for Risk Prediction

Antonis C. Antoniou, Jonathan Beesley, Lesley McGuffog, Olga M. Sinilnikova, Sue Healey, Susan L. Neuhausen, Yuan Chun Ding, Timothy R. Rebbeck, Jeffrey N. Weitzel, Henry T. Lynch, Claudine Isaacs, Patricia A. Ganz, Gail Tomlinson, Olufunmilayo I. Olopade, Fergus J. Couch, Xianshu Wang, Noralane M. Lindor, Vernon S. Pankratz, Paolo Radice, Siranoush Manoukian, Bernard Peissel, Daniela Zaffaroni, Monica Barile, Alessandra Viel, Anna Allavena, Valentina Dall'Olio, Paolo Peterlongo, Csilla I. Szabo, Michal Zikan, Kathleen Claes, Bruce Poppe, Lenka Foretova, Phuong L. Mai, Mark H. Greene, Gad Rennert, Flavio Lejbkiewicz, Gord Glendon, Hilmi Ozcelik, Irene L. Andrulis for the Ontario Cancer Genetics Network, Mads Thomassen, Anne-Marie Gerdes, Lone Sunde, Dorthea Cruger, Uffe Birk Jensen, Maria Caligo, Eitan Friedman, Bella Kaufman, Yael Laitman, Roni Milgrom, Maya Dubrovsky, Shimrit Cohen, Ake Borg, Helena Jernström, Annika Lindblom, Johanna Rantala, Marie Stenmark-Askmal, Beatrice Melin for SWE-BRCA, Kate Nathanson, Susan Domchek, Ania Jakubowska, Jan Lubinski, Tomasz Huzarski, Ana Osorio, Adriana Lasa, Mercedes Durán, Maria-Isabel Tejada, Javier Godino, Javier Benitez, Ute Hamann, Mieke Kriege, Noline Hoogerbrugge, Rob B. van der Luijt, Christi J. van Asperen, Peter Devilee, E.J. Meijers-Heijboer, Marinus J. Blok, Cora M. Aalfs, Frans Hogervorst, Matti Rookus for HEBON, Margaret Cook, Clare Oliver, Debra Frost, Don Conroy, D. Gareth Evans, Fiona Lalloo, Gabriella Pichert, Rosemarie Davidson, Trevor Cole, Jackie Cook, Joan Paterson, Shirley Hodgson, Patrick J. Morrison, Mary E. Porteous, Lisa Walker, M. John Kennedy, Huw Dorkins, Susan Peock for EMBRACE, Andrew K. Godwin, Dominique Stoppa-Lyonnet, Antoine de Pauw, Sylvie Mazoyer, Valérie Bonadona, Christine Lasset, Hélène Dreyfus, Dominique Leroux, Agnès Hardouin, Pascaline Berthet, Laurence Faivre for GEMO, Catherine Loustalot, Tetsuro Noguchi, Hagay Sobol, Etienne Rouleau, Catherine Nogues, Marc Frénay, Laurence Vénat-Bouvet for GEMO, John L. Hopper, Mary B. Daly, Mary B. Terry, Esther M. John, Sandra S. Buys, Yosuf Yassin, Alexander Miron, David Goldgar for the Breast Cancer Family Registry, Christian F. Singer, Anne Catharina Dressler, Daphne Gschwantler-Kaulich, Georg Pfeiler, Thomas V.O. Hansen, Lars Jnson, Bjarni A. Agnarsson, Tomas Kirchhoff,

Kenneth Offit, Vincent Devlin, Ana Dutra-Clarke, Marion Piedmonte, Gustavo C. Rodriguez, Katie Wakeley, John F. Boggess, Jack Basil, Peter E. Schwartz, Stephanie V. Blank, Amanda Ewart Toland, Marco Montagna, Cinzia Casella, Evgeny Imyanitov, Laima Tihomirova, Ignacio Blanco, Conxi Lazaro, Susan J. Ramus, Lara Sucheston, Beth Y. Karlan, Jenny Gross, Rita Schmutzler, Barbara Wappenschmidt, Christoph Engel, Alfons Meindl, Magdalena Lochmann, Norbert Arnold, Simone Heidemann, Raymonda Varon-Mateeva, Dieter Niederacher, Christian Sutter, Helmut Deissler, Dorothea Gadzicki, Sabine Preisler-Adams, Karin Kast, Ines Schönbuchner, Trinidad Caldes, Miguel de la Hoya, Kristiina Aittomäki, Heli Nevanlinna, Jacques Simard, Amanda B. Spurdle, Helene Holland, Xiaoqing Chen for kConFab, Radka Platte, Georgia Chenevix-Trench, and Douglas F. Easton on behalf of CIMBA

Précis: Findings reveal that common low penetrance breast cancer susceptibility alleles result in risk differences for *BRCA1* and *BRCA2* mutation carriers that may be sufficient to influence clinical management of individuals carrying mutations in these genes.

9755

Resveratrol, a Red Wine Polyphenol, Suppresses Pancreatic Cancer by Inhibiting Leukotriene A₄ Hydrolase

Naomi Oi, Chul-Ho Jeong, Janos Nadas, Yong-Yeon Cho, Angelo Pugliese, Ann M. Bode, and Zigang Dong

Précis: Findings implicate the proinflammatory enzyme *LTA4H*, a target for inhibition by the red wine compound resveratrol, in the anticancer effects of this compound in pancreatic cancer.

9765

Genetic Variants in MicroRNA Biosynthesis Pathways and Binding Sites Modify Ovarian Cancer Risk, Survival, and Treatment Response

Dong Liang, Larissa Meyer, David W. Chang, Jie Lin, Xia Pu, Yuanqing Ye, Jian Gu, Xifeng Wu, and Karen Lu

Précis: This case controlled study offers genetic evidence that natural variations in microRNA biosynthesis and target binding can strongly affect ovarian cancer risk and treatment outcomes.

9777 **Multicenter Study of the Association between Betapapillomavirus Infection and Cutaneous Squamous Cell Carcinoma**

Jan Nico Bouwes Bavinck, Rachel E. Neale, Damiano Abeni, Sylvie Euvrard, Adele C. Green, Catherine A. Harwood, Maurits N.C. de Koning, Luigi Naldi, Ingo Nindl, Michael Pawlita, Herbert Pfister, Charlotte M. Proby, Wim G.V. Quint, Jan ter Schegget, Tim Waterboer, Sönke Weissenborn, and Mariet C.W. Feltkamp, on behalf of the EPI-HPV-UV-CA group

Précis: Although sun exposure and sun sensitivity are the dominant risk factors for squamous cell carcinoma, this study suggests that infection with human papillomaviruses of the beta genus may contribute to development of these common cancers in many parts of the world.

9787 **Plasma Micronutrients and the Acquisition and Clearance of Anal Human Papillomavirus Infection: The Hawaii HPV Cohort Study**

Yurii B. Shvetsov, Brenda Y. Hernandez, Lynne R. Wilkens, Pamela J. Thompson, Adrian A. Franke, Xuemei Zhu, and Marc T. Goodman

Précis: Several carotenoids were found in this study to reduce the risk and clearance of anal HPV infections that contribute to anal cancer.

9808 **Differential Contextual Responses of Normal Human Breast Epithelium to Ionizing Radiation in a Mouse Xenograft Model**

Philip J. Coates, M. Virginia C.L. Appleyard, Karen Murray, Caroline Ackland, June Gardner, Douglas C. Brown, Dougal J.A. Adamson, Lee B. Jordan, Colin A. Purdie, Alastair J. Munro, Eric G. Wright, John A. Dewar, and Alastair M. Thompson

Précis: Responses of normal human breast epithelium to ionizing radiation are strongly influenced by the surrounding stroma, illustrating the importance of whole tissue rather than single cell line studies.

9816 **Therapeutic Targeting of TLR9 Inhibits Cell Growth and Induces Apoptosis in Neuroblastoma**

Chiara Brignole, Danilo Marimpietri, Daniela Di Paolo, Patrizia Perri, Fabio Morandi, Fabio Pastorino, Alessia Zorzoli, Gabriella Pagnan, Monica Loi, Irene Caffa, Giovanni Erminio, Riccardo Haupt, Claudio Gambini, Vito Pistoia, and Mirco Ponzoni

Précis: Findings deepen emerging evidence that Toll receptors expressed on human cancer cells are functionally relevant and potentially therapeutically significant, here in treatment of neuroblastoma.

9827 **Inhibition of ALK, PI3K/MEK, and HSP90 in Murine Lung Adenocarcinoma Induced by EML4-ALK Fusion Oncogene**

Zhao Chen, Takaaki Sasaki, Xiaohong Tan, Julian Carretero, Takeshi Shimamura, Danan Li, Chunxiao Xu, Yuchuan Wang, Guillaume O. Adelmant, Marzia Capelletti, Hyun Joo Lee, Scott J. Rodig, Christa Borgman, Seung-il Park, Hyeong Ryul Kim, Robert Padera, Jarrod A. Marto, Nathanael S. Gray, Andrew L. Kung, Geoffrey I. Shapiro, Pasi A. Jänne, and Kwok-Kin Wong

Précis: Results characterize a preclinical mouse model that can compare targeted and combinatorial treatments for lung cancers characterized by rearrangement of the ALK kinase, which do not involve EGFR or KRAS mutations.

THERAPEUTICS, TARGETS, AND CHEMICAL BIOLOGY

9798 **Serum microRNA Profiles Serve as Novel Biomarkers for HBV Infection and Diagnosis of HBV-Positive Hepatocarcinoma**

Li-Min Li, Zhi-Bin Hu, Zhen-Xian Zhou, Xi Chen, Fen-Yong Liu, Jun-Feng Zhang, Hong-Bing Shen, Chen-Yu Zhang, and Ke Zen

Précis: An miRNA-based serum test for HBV infection and hepatocarcinoma is described that could greatly assist clinical management of these widespread diseases.

- 9837 **Definition of an Enhanced Immune Cell Therapy in Mice That Can Target Stem-Like Lymphoma Cells**
Christopher H. Contag, Rachel Sikorski, Robert S. Negrin, Tobi Schmidt, Alice C. Fan, Pavan Bachireddy, Dean W. Felsher, and Steve H. Thorne
Précis: A combined immune cell-oncolytic virus therapy produces an antitumor immune response that can clear minimal disease as defined by persistence of cells with a tumor-initiating phenotype.
- 9846 **Preclinical Evaluation of AMG 900, a Novel Potent and Highly Selective Pan-Aurora Kinase Inhibitor with Activity in Taxane-Resistant Tumor Cell Lines**
Marc Payton, Tammy L. Bush, Grace Chung, Beth Ziegler, Patrick Eden, Patricia McElroy, Sandra Ross, Victor J. Cee, Holly L. Deak, Brian L. Hodous, Hanh Nho Nguyen, Philip R. Olivieri, Karina Romero, Laurie B. Schenkel, Annette Bak, Mary Stanton, Isabelle Dussault, Vinod F. Patel, Stephanie Geuns-Meyer, Robert Radinsky, and Richard L. Kendall
Précis: Findings illustrate the nature of an Aurora kinase inhibitor that is distinct from others being studied in this class, in its being active in tumor cells that are resistant to traditional antimitotic drugs such as taxanes.
- 9855 **Photothermal Response of Human and Murine Cancer Cells to Multiwalled Carbon Nanotubes after Laser Irradiation**
Jessica W. Fisher, Saugata Sarkar, Cara F. Buchanan, Christopher S. Szot, Jon Whitney, Heather C. Hatcher, Suzy V. Torti, Christopher G. Rylander, and Marissa Nichole Rylander
Précis: This study offers an initial proof of concept and mechanistic rationale for the use of carbon nanotubes coupled with laser irradiation in cancer therapy.
- 9865 **Antitumor Activity of Pyridocarbazole and Benzopyridoindole Derivatives that Inhibit Protein Kinase CK2**
Renaud Prudent, Virginie Moucadel, Chi-Hung Nguyen, Caroline Barette, Frédéric Schmidt, Jean-Claude Florent, Laurence Lafanechère, Céline F. Sautel, Eve Duchemin-Pelletier, Elodie Spreux, Odile Filhol, Jean-Baptiste Reiser, and Claude Cochet
Précis: Findings lay the foundation for development of clinically useful CK2 inhibitors derived from a well-studied scaffold with suitable pharmacokinetic properties, addressing an unmet clinical interest in useful inhibitors of this enzyme.
- 9875 **Blockade of the Ubiquitin Protease UBP43 Destabilizes Transcription Factor PML/RAR α and Inhibits the Growth of Acute Promyelocytic Leukemia**
Yongli Guo, Andrey V. Dolinko, Fadzai Chinyenetere, Bruce Stanton, Jennifer M. Bomberger, Eugene Demidenko, Da-Cheng Zhou, Robert Gallagher, Tian Ma, Fabrizio Galimberti, Xi Liu, David Sekula, Sarah Freemantle, and Ethan Dmitrovsky
Précis: Findings define the ubiquitin protease UBP43 as a tractable pharmacological target for treatment of acute promyelocytic leukemia.
- 9886 **Increase of Plasma VEGF after Intravenous Administration of Bevacizumab Is Predicted by a Pharmacokinetic Model**
Marianne O. Stefanini, Florence T. H. Wu, Feilim Mac Gabhann, and Aleksander S. Popel
Précis: A mathematical model is offered to explain the observed increase of plasma VEGF after bevacizumab administration in patients, which occurs due to intercompartmental exchange of VEGF, the anti-VEGF agent, and the VEGF/anti-VEGF complex.
- 9895 **Degradation of MDM2 by the Interaction between Berberine and DAXX Leads to Potent Apoptosis in MDM2-Overexpressing Cancer Cells**
Xiaoling Zhang, Lubing Gu, Jiansha Li, Noopur Shah, Jing He, Lin Yang, Qun Hu, and Muxiang Zhou
Précis: Mechanistic underpinning for the anticancer properties of an important constituent of Chinese herbal medicine is revealed.
- 9905 **Sphingosine-1-Phosphate Activates the AKT Pathway to Protect Small Intestines from Radiation-Induced Endothelial Apoptosis**
Stéphanie Bonnaud, Colin Niaudet, François Legoux, Isabelle Corre, Gregory Delpon, Xavier Saulquin, Zvi Fuks, Marie-Hélène Gaugler, Richard Kolesnick, and François Paris
Précis: Results offer pharmacologic and mechanistic proofs that sphingosine-1-phosphate can protect endothelial cells against acute radiation enteropathy.

9916 **p21^{CIP-1/WAF-1} Induction Is Required to Inhibit Prostate Cancer Growth Elicited by Deficient Expression of the Wnt Inhibitor Dickkopf-1**

Christopher L. Hall, Honglai Zhang, Shobun Baile, Mats Ljungman, Stuart Kuhstoss, and Evan T. Keller

Précis: Findings establish a pivotal role for the CDK inhibitor p21^{CIP} in opposing the growth stimulatory effects of WNT growth factors commonly activated in a variety of common human cancers.

9927 **HER2 Silences Tumor Suppression in Breast Cancer Cells by Switching Expression of C/EBPβ Isoforms**

Anna Arnal-Estapé, Maria Tarragona, Mònica Morales, Marc Guiu, Cristina Nadal, Joan Massagué, and Roger R. Gomis

Précis: A novel mechanism is revealed through which HER2 silences tumor suppression in a concerted manner, contributing to the potency of this oncogene in breast cancer.

9937 **Aldehyde Dehydrogenase Activity Selects for Lung Adenocarcinoma Stem Cells Dependent on Notch Signaling**

James P. Sullivan, Monica Spinola, Michael Dodge, Maria G. Raso, Carmen Behrens, Boning Gao, Katja Schuster, Chunli Shao, Jill E. Larsen, Laura A. Sullivan, Sofia Honorio, Yang Xie, Pier P. Scaglioni, J. Michael DiMaio, Adi F. Gazdar, Jerry W. Shay, Ignacio I. Wistuba, and John D. Minna

Précis: Lung cancer stem cells identified by their aldehyde dehydrogenase activity are sensitive to Notch signaling suppression and associated with poor prognosis.

9949 **Novel Metastasis-Related Gene CIM Functions in the Regulation of Multiple Cellular Stress-Response Pathways**

Kiyoshi Yanagisawa, Hiroyuki Konishi, Chinatsu Arima, Shuta Tomida, Toshiyuki Takeuchi, Yukako Shimada, Yasushi Yatabe, Tetsuya Mitsudomi, Hirotaka Osada, and Takashi Takahashi

Précis: Findings define a mechanism that coordinately facilitates tolerance to hypoxia and ER stress, two types of cellular stresses that are commonly evoked at metastatic sites, to promote the survival of metastatic cancer cells.

9959

Deficiencies in the Fanconi Anemia DNA Damage Response Pathway Increase Sensitivity to HPV-Associated Head and Neck Cancer

Jung Wook Park, Henry C. Pitot, Katerina Strati, Nicole Spardy, Stefan Duensing, Markus Grompe, and Paul F. Lambert

Précis: Animal studies provide support for the hypothesis that Fanconi anemia patients are at increased risk for human papillomavirus-associated cancer.

9969

Endothelial Cell-Initiated Signaling Promotes the Survival and Self-Renewal of Cancer Stem Cells

Sudha Krishnamurthy, Zhihong Dong, Dmitry Vodopyanov, Atsushi Imai, Joseph I. Helman, Mark E. Prince, Max S. Wicha, and Jacques E. Nör

Précis: Findings reveal a critical role for molecular crosstalk initiated by endothelial cells on the biology of cancer stem cells.

9979

Integrity of SOS1/EPSS/ABI1 Tri-Complex Determines Ovarian Cancer Metastasis

Huijun Chen, Xufeng Wu, Zhixing K. Pan, and Shuang Huang

Précis: Metastasis of ovarian cancer cells relies on a signaling complex that influences actin organization and vesicular trafficking.

9991

Sp100 as a Potent Tumor Suppressor: Accelerated Senescence and Rapid Malignant Transformation of Human Fibroblasts through Modulation of an Embryonic Stem Cell Program

Dmitri G. Negorev, Olga V. Vladimirova, Andrew V. Kossenkov, Elena V. Nikonova, Renee M. Demarest, Anthony J. Capobianco, Michael K. Showe, Frank J. Rauscher III, Louise C. Showe, and Gerd G. Maul

Précis: Findings implicate the PML/ND10 nuclear body protein SP100 in tumor suppression and epigenetic maintenance of gene expression.

10002

Homotypic Gap Junctional Communication Associated with Metastasis Suppression Increases with PKA Activity and Is Unaffected by PI3K Inhibition

Thomas M. Bodenshteyn, Kedar S. Vaidya, Aimen Ismail, Benjamin H. Beck, Leah M. Cook, Anne R. Diers, Aimee Landar, and Danny R. Welch

Précis: Findings reveal that PKA activation can restore gap junctional information in cancer cells, potentially exploitable for antimetastatic therapy.

CORRECTIONS

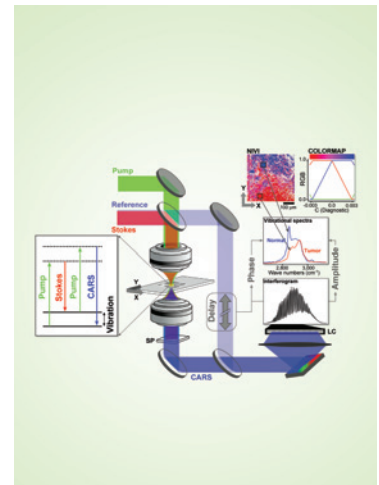
10015

**Correction: Online Publication
Date for *Cancer Research*
October 15, 2010 Article**

- 10012 | **Correction: An Optimized
Telomerase-Specific Lentivirus for
Optical Imaging of Tumors**
- 10014 | **Correction: Conditional Regulatory
T-Cell Depletion Releases Adaptive
Immunity Preventing Carcinogenesis
and Suppressing Established Tumor
Growth**

ABOUT THE COVER

Molecular histopathology is performed with Spectrally-Reconstructed Nonlinear Interferometric Vibrational Imaging (SR-NIVI), a new spatially-resolved microspectroscopy technique based on coherent anti-Stokes Raman scattering that rapidly generates color-coded histological images based on intrinsic molecular vibrational contrast to characterize tissue with no external staining or molecular labeling. In the article by Chowdary and colleagues, SR-NIVI is used to quantitatively differentiate with high accuracy cancer from healthy tissue and define cancer boundaries in a preclinical breast cancer model. With advancing efforts in compact laser sources and beam delivery systems, *in vivo* molecular histopathology applications using SR-NIVI are possible. For details, see the article by Chowdary and colleagues on page 9562 of this issue.



Cancer Research

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