Contents

Highlights of This Issue  1

SPECIAL FEATURES

CCR Translations

3 Molecular Targeting of Neural Cancer Stem Cells: TTAGGG, You're It!
Anita B. Hjelmeland and Jeremy N. Rich
See article p. 111

CCR New Strategies

6 New Strategies in the Molecular Targeting of Glioblastoma: How Do You Hit a Moving Target?
Timothy F. Cloughesy and Paul S. Mischel

Molecular Pathways

12 p27: A Barometer of Signaling Deregulation and Potential Predictor of Response to Targeted Therapies
Seth A. Wander, Dekuang Zhao, and Joyce M. Slingerland

Review

19 Interindividual Variability of Response to Rituximab: From Biological Origins to Individualized Therapies
Guillaume Cartron, Ralf Ulrich Trappe, Philippe Solal-Céligny, and Michael Hallek

HUMAN CANCER BIOLOGY

31 Frequent hSNF5/INI1 Germline Mutations in Patients with Rhabdoid Tumor
Franck Bourdeaut, Delphine Lequin, Laurence Brugères, Stéphanie Reynaud, Christelle Dufour, François Doz, Nicolas André, Jean-Louis Stephan, Yves Pérel, Odile Oberlin, Daniel Orbach, Christophe Bergeron, Xavier Rialland, Paul Fréneaux, Dominique Ranchere, Dominique Figarella-Branger, Georges Audry, Stéphanie Puget, D. Gareth Evans, Joan Carles Ferreres Pina, Valeria Capra, Véronique Mosseri, Isabelle Coupier, Marion Gautier-Villars, Gaëlle Pierron, and Olivier Delattre

39 Long Exposure of Environmental Tobacco Smoke Associated with Activating EGFR Mutations in Never-Smokers with Non–Small Cell Lung Cancer
Tomoya Kawaguchi, Masahiko Ando, Akihito Kubo, Minoru Takada, Shinji Atagi, Kyoichi Okishio, Kazuhiro Asami, Akihide Matsumura, Kazuyuki Tsujino, Sai-Hong Ignatius Ou, and Hidefumi Sasaki

46 Characterization of Tumor-Suppressive Function of SOX6 in Human Esophageal Squamous Cell Carcinoma
Yan-Ru Qin, Hong Tang, Fajun Xie, Haibo Liu, Yinghui Zhu, Jiaooyu Ai, Leilei Chen, Yan Li, Dora L. Kwong, Li Fu, and Xin-Yuan Guan

56 Ewing Tumors That Do Not Overexpress BMI-1 Are a Distinct Molecular Subclass with Variant Biology: A Report from the Children's Oncology Group
Aaron Cooper, John van Doorninck, Lingyun Ji, Darren Russell, Marc Ladanyi, Hiroyuki Shimada, Mark Kralio, Richard B. Womer, Jessie Hao-ru Hsu, Dafydd Thomas, Timothy J. Triche, Richard Spots, and Elizabeth R. Lawlor
Polysaccharide Krestin Is a Novel TLR2 Agonist that Mediates Inhibition of Tumor Growth via Stimulation of CD8 T Cells and NK Cells
Hailing Lu, Yi Yang, Ekram Gad, Cynthia A. Wenner, Amy Chang, Emily R. Larson, Yushe Dang, Mark Martzen, Leanna J. Standish, and Mary L. Disis

Interleukin-6 Modulates Graft-versus-Host Responses after Experimental Allogeneic Bone Marrow Transplantation
Isao Tawara, Motoko Koyama, Chen Liu, Tomomi Toubai, Dafydd Thomas, Rebecca Evers, Peter Chockley, Evelyn Nieves, Yaping Sun, Kathleen P. Lowlar, Chelsea Malter, Norhiro Nishimoto, Geoffrey R. Hill, and Pavan Reddy

Role of ATP-Binding Cassette and Solute Carrier Transporters in Erlotinib CNS Penetration and Intracellular Accumulation
Mohamed A. Elmeliegy, Angel M. Carcaboso, Michael Tagen, Feng Bai, and Clinton F. Stewart

A Novel Fusion Toxin Derived from an EpCAM-Specific Designed Ankyrin Repeat Protein Has Potent Antitumor Activity
Patricia Martin-Killias, Nikolas Stefan, Sacha Rothschild, Andreas Plückthun, and Uwe Zangemeister-Wittke

Neural Tumor-Initiating Cells Have Distinct Telomere Maintenance and Can be Safely Targeted for Telomerase Inhibition
Pedro Castelo-Branco, Cindy Zhang, Tatiana Lipman, Mayumi Fujitani, Loen Hansford, Ian Clarke, Calvin B. Harley, Robert Tressler, David Malkin, Erin Walker, David R. Kaplan, Peter Dirks, and Uri Tabori

The Ability to Form Primary Tumor Xenografts Is Predictive of Increased Risk of Disease Recurrence in Early-Stage Non–Small Cell Lung Cancer
Thomas John, Derek Kohler, Melanie Pintilie, Naoki Yanagawa, Nhu-An Pham, Ming Li, Devang Panchal, Frances Hui, Fannong Meng, Frances A. Shepherd, and Ming-Sound Tsao

Pazopanib Reveals a Role for Tumor Cell B-Raf in the Prevention of HER2 Breast Cancer Brain Metastasis
Brunilde Grill, Diane Palmieri, Yong Qian, DeeDee Smart, Lilia Ileva, David J. Liewehr, Seth M. Steinberg, and Patricia S. Steeg
ABOUT THE COVER

Human glioma tumor initiating cells are targets for telomerase inhibition. Immunofluorescence studies show that glioma tumor-initiating cells express high levels of nestin (neuronal precursor cells marker, shown in green). These cells have substantially higher telomerase activity than normal tissue stem cells and can therefore be specifically and safely targeted for telomerase inhibition. For further details, please see Castelo-Branco and coworkers on page 111 in this issue.