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. Slangerland

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 Pérèl, 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, Gaelle 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, Shinya 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, Fujun Xie, Haibo Liu, Yinghui Zhu, Jiaoyu Ai, Leilei Chen, Yan Li, Dora L. Kwong, Li Fu, and Xin-Yuan Guan

CANCER THERAPY: PRECLINICAL

67 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

77 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. Lowner, Chelsea Maltor, Norihiro Nishimoto, Geoffrey R. Hill, and Pavan Reddy

89 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

100 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

111 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 Tabory

IMAGING, DIAGNOSIS, PROGNOSIS

154 Combined Analysis of Estrogen Receptor β-1 and Progesterone Receptor Expression Identifies Lung Cancer Patients with Poor Outcome
Laura P. Stabile, Sanja Dacic, Stephanie R. Land, Diana E. Lenzner, Rajiv Dhir, Marie Acquafondata, Rodney J. Landreneau, Jennifer R. Grandis, and Jill M. Siegfried

165 Prognostic Significance of the Detection of Peripheral Blood CEACAM5mRNA-Positive Cells by Real-Time Polymerase Chain Reaction in Operable Colorectal Cancer
Nikolaos Vardakis, Ippokratis Messaritakis, Chara Papadaki, Georgios Agoglossakis, Maria Sfakianaki, Zachareina Saridaki, Stella Apostolaki, Ioannis Koutoubakis, Maria Perraki, Dora Hatziidakis, Dimitris Mavroudis, Vassilis Georgoulas, and John Souglakos

CANCER THERAPY: CLINICAL

174 Total Marrow Irradiation: A New Ablative Regimen as Part of Tandem Autologous Stem Cell Transplantation for Patients with Multiple Myeloma
George Somlo, Ricardo Spielberger, Paul Frankel, Chatchada Karanes, Amita Krishnan, Pablo Parker, Leslie Popplewell, Firoozeh Sahebi, Neil Kogut, David Snyder, An Liu, Timothy Schultheiss, Stephen Forman, and Jeffrey Y. C. Wong
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.